

FINAL DRAFT 10/8/99

Sampling Report

CENTRAL STEEL & DRUM SITE 704-738 Doremus Ave. Block 5074, Lot 1 Newark, Essex County New Jersey 07105

Drum/Waste Pile Sampling Event March 31, 1998

Prepared by:

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EXECUTIVE SUMMARY

The Site is located at 704-738 Doremus Avenue, Newark, Essex County, New Jersey, 07105, and consists of a large production building on a site occupying 8.5 acres and is situated in a highly industrialized area. The Site is adjacent to other industrial facilities. Within 1.5 miles of the Site are residential areas, industry, commercial properties, commuter/freight railroad lines and major city arterials.

On March 31, 1998, the U.S. EPA Removal Action Branch with the support of the Superfund Technical Assessment and Response Team (START), performed representative sampling of drums found at the Central Steel & Drum Site to provide analytical results that are legally defensible in a court of law to support cost recovery activities.

Samples were analyzed for target compound list (TCL) including tentatively identified compounds (TICs), target analyte list (TAL) metals, and RCRA characteristics (TCLP organics, metals and ignitability). The samples were collected by U.S. EPA and START personnel and submitted to a CLP participating private laboratory for analysis. In-addition, field screening for lead from the waste pile area was performed using an X-ray Fluorescence (XRF) unit.

In general, the waste streams were broken down into two classes: flammable organic liquids, and organic liquids and solids. The drums sampled were overpacked and staged within the warehouse property of the Central Steel & Drum site.

Waste analysis results is consistent with substances identified during the removal action, paint related waste materials (solids and liquids) consisting of thinners, lacquers, and varnishes. Many of the drums sampled were separated into both solid and liquid phases. EPA requested the contracted laboratory to analyze both phases to support identification of the material and its potential hazard.

The following hazardous constituents and concentration ranges were identified during the March 31, 1998, sampling event:

TARGET COMPOUND LIST (TCL)

Waste solids: acetone (580 ppb to 1,100,000 ppb); methylene chloride (150 ppb to 490,000 ppb); benzene (4,700 ppb to 8,800 ppb); tetrachloroethene (250 ppb); toluene (1,800 ppb to 23,000,000 ppb); ethylbenzene (170 ppb to 8,800,000 ppb); xylene (840 ppb to 47,000,000 ppb); 2-butanone (160 ppb to 9,500,000 ppb); 4-methyl-2-pentanone (18,000 ppb to 10,000,000 ppb); 2-hexanone (3,400,000 ppb); naphthalene (24,000 ppb to 2,500,000 ppb); 2-methylnaphthalene (480 ppb to 570,000 ppb); fluorene (110,000 ppb); phenanthrene (170,000 ppb to 200,000 ppb); bis(2-ethylhexyl)phthalate (13,000 ppb to 210,000 ppb); and phenol (18,000,000 ppb to 36,000,000 ppb).

Waste liquids: acetone (4 ppb to 9,900 ppb); methylene chloride (4 ppb to 36 ppb); benzene (160 ppb to 270 ppb); toluene (11 ppb to 7,500 ppb); ethylbenzene (24 ppb to 1,100 ppb); xylene (1 ppb to 7,500 ppb); 2-butanone (5 ppb to 12,,000 ppb); 4-methyl-2-pentanone (99 ppb to 490

ppb); naphthalene (42 ppb to 390 ppb); 2-methylnaphthalene (34 ppb to 1,100 ppb); fluorene (120 ppb); phenanthrene (250 ppb); phenol (130 ppb to 5,300 ppb); benzyl alcohol (1,000 ppb to 1,200 ppb); 2-methylphenol (300 ppb to 1,500 ppb); 4-methylphenol (630 ppb to 1,200 ppb); and benzoic acid (620 ppb to 97,000 ppb).

See Table 1a for summary of all analytes and data result qualifiers.

• TARGET ANALYTE LIST (TAL)

Waste Solids: chromium (.49 ppm to 1,400 ppm); lead (18.1 ppm to 12,300 ppm) and zinc (5.8 ppm to 203 ppm).

Waste Liquids: chromium (15.2 ppm to 272 ppm); lead (18.4 ppm to 7,760 ppm) and zinc (2.8 ppm to 98,700 ppm).

See Table 1b for summary of all analytes and data result qualifiers.

RCRA TCLP CHARACTERISTIC RESULTS (Organics and Metals)

Waste Solids: methyl ethyl ketone (250 ppb to 520,000 ppb); 2-methyl phenol (8 ppb to 51 ppb); 3+4-methyl phenol (43 ppb to 84 ppb); 2,4-D (2.6 ppb to 13 ppb); arsenic (.0035 ppm); barium (.0307 ppm to .437 ppm); cadium (.00045 ppm to .0091 ppm); chromium (.0013 ppm to .0265 ppm); and lead (.0209 ppm to 10.1 ppm).

Note: Sample 204415 (Drum # D0050) analytical result for methyl ethyl ketone (520,000 ppm), exceeded the TCLP regulatory limit of 200,000 ppb.

Waste Liquids: methyl ethyl ketone (13,000 ppb); 2-methyl phenol (190 ppb); 3+4-methyl phenol (520 ppb); barium (.0645 ppm); cadium (.0143 ppm); chromium (.0255 ppm); selenium (.188 ppm) and lead (.0516 ppm).

See Table 1c for summary of all analytes and data result qualifiers.

RCRA FLASHPOINT CHARACTERISTIC RESULTS

Samples 204404, 204411, 204412, 204415, 204416, and 204417 were identified to have flash points less than 140 \mathcal{F} (60 \mathcal{C}), are hazardous waste.

X-Ray Fuorescence Report

Field screening for lead from the ash waste pile area was performed using an X-ray Fluorescence (XRF) unit. Lead concentration ranged from 167 ppm to 9,480 ppm. These concentration ranges are consistent with the levels found in the sampled drums (18.1 ppm to 12,300 ppm).

See Attachment III, X-Ray Fuorescence Report - April 22, 1998.

1.0 BACKGROUND

The Site is located at 704-738 Doremus Avenue, Newark, New Jersey, 07105. The Site is situated in an industrial area in the Iron Bound section of Newark and consists of a large manufacturing building located on 8.5 acres. Before 1952, an ink manufacturer occupied this Site (International Printing Ink, Division of Interchemical Corporation, now part of Inmont Corp.). From 1952 to approximately 1991, Central Steel and Drum operated a drum reconditioning business. After vacating the property, a container shipping operation leased the property. According to NJDEP, the property has been abandoned since 1994

The Site consists of one main building (previously several buildings that are now interconnected). It has been used as a commercial dumping ground (evidenced by truck tires, construction debris, etc.). The property is partially fenced and there are no gates at the entrance. However, vehicles cannot enter the property, since there are four large concrete blocks (approximately 3 feet high) barring entry.

The production building is 200ft x 500ft of masonry construction with a metal truss roof. The building is in deteriorated condition and the roof leaks. All utilities have been turned off, so there was no fire suppression system available in the building. The building was found to be unsecured and there was evidence of vandalism, dumping and public entry.

During the months of September 1997 thru June 1998, the U.S. EPA Response and Prevention Branch (RPB), performed a Time-Critical Removal Action at the Central Steel & Drum site. As part of this action, approximately 260, 55-gallon drums were sampled, characterized (i.e., hazardous characterization, compatibility, and bulking operations) and later overpacked for off-site disposal.

On March 31, 1998, the U.S. EPA Removal Action Branch with the support of the Superfund Technical Assessment and Response Team (START), performed representative sampling of drums found at the Central Steel & Drum Site to provide analytical results that are legally defensible in a court of law to support cost recovery activities.

The following sampling personnel were involved with work on this project:

<u>rersonnei</u>	Responsibility
Louis DiGuardia	USEPA, OSC, Project Director
Ray Klimcsak	START, Project Manager, Field Coordinator,
Michael Mahnkopf	START, Site Health & Safety Officer
Joseph M. Soroka	START, Site QA/QC Officer
David Adams	START, Sampling, Shipping
Bruce Lin	START, Sampling, Shipping

This report covers sampling performed during the following time period(s):

- o March 31, 1998
- o November 25, 1997 (see Attachment IV, U.S EPA Region II, DESA/MAB RCRA Report)

2.0 DATA USE OBJECTIVES

The Region II, U.S. EPA RPB with technical support from START (Weston) conducted a Time-Critical Removal Action at the Central Steel & Drum site during the months of September 1997 thru June 1998. As part of this action, approximately 260, 55-gallon drums were sampled, characterized (i.e., hazardous characterization, compatibility, and bulking operations) and later overpacked for off-site disposal. In-addition, approximately 1100 tons of material from the ash waste pile was also characterized for disposal requirements.

The objective of this sampling event was to provide legally defensible analytical data to the USEPA enforcement group in their efforts to identify potential responsible parties for cost recovery.

This sampling event was performed by U.S. EPA Removal Action Branch and START personnel. Samples were analyzed for target compound list (TCL) including tentatively identified compounds (TICs), target analyte list (TAL) metals, and RCRA characteristics (TCLP organics, metals and ignitability). The samples were collected by U.S. EPA and START personnel and submitted to a CLP participating private laboratory for analysis. In-addition, field screening for lead from the waste pile area was performed using an X-ray Fluorescence (XRF) unit.

November 25, 1997 - DESA-MAB and NEIC RCRA Sampling Event

In November 25, 1997, samples were collected by U.S. EPA DESA/Monitoring and Assessment Branch and NEIC personnel during a RCRA sampling investigation. Approximately twenty-four, 55-gallon drums were sampled and analyzed for the RCRA ignitability characteristic. The samples were submitted to the US EPA Edison Laboratory for analysis. The full report is included in Attachment IV, U.S EPA Region II, RCRA Report - dated: November 25, 1997.

3.0 QUALITY ASSURANCE OBJECTIVES

The overall Quality Assurance (QA) objective for chemical measurement data associated with both sampling events was to provide analytical results that are legally defensible in a court of law. The QA program incorporated Quality Control (QC) procedures for field sampling, chain of custody, laboratory analyses, and reporting to assure generation of sound analytical results.

The EPA On-Scene Coordinator (OSC) specified a Level 2 QA objective (QA-2). Details of this QA level are provided in Section 6.0.

4.0 APPROACH AND SAMPLING METHODOLOGIES

4.1 Sampling Equipment

All products (liquid/sludge) samples form the overpacked drums were samples using dedicated coilwasa's or drum thieves. Soil/sediment samples were collected with dedicated disposable trowels in order to avoid cross contamination. XRF screening was accomplished using the Spectrace Model 9000 XRF unit.

Drum Sampling

All drums were sampled using dedicated sampling equipment. A glass composite liquid waste sampler (coliwasa) and/or drum thief was used for sampling liquid drum contents. The thief was inserted into the drum until a solid layer or bottom of the drum was encountered. Upon equilibration of the sample in the tube, it was capped by the sampler and carefully removed for discharge into an appropriate dedicated sample container by gravity. The glass coliwasa permits collection of a sample from the full depth of a drum and maintains it in the transfer tube until delivery to the sample container. The coliwasa is designed to permit representative sampling of multi-phase liquid wastes. The drum sampling was conducted as per U.S. EPA-ERT Drum Sampling Standard Operating Procedure (SOP) #2009, see Attachment I, Sampling QA/QC Work Plan.

Drum/Waste Pile Sampling

Disposable plastic scoops were used to sample solidified drum waste and/or ash waste pile material. All samples collected, except those for volatile organic analysis (VOC), were placed into a stainless steel container and mixed thoroughly before being transferred to an appropriate sample container. The solidified drum waste and/or ash waste pile sampling was conducted as per U.S. EPA-ERT Waste Pile Sampling SOP #2017, see Attachment I, Sampling QA/QC Work Plan.

All samples were collected using sampling equipment and procedures specified in the March 5, 1998, approved Sampling QA/QC Work Plan (and later revisions). All sampling equipment and materials were decontaminated according to the U.S. EPA-ERT Sampling Equipment Decontamination: SOP # 2006, see Attachment I, Sampling QA/QC Work Plan.

4.2 Sampling Design

A maximum of 20 samples were collected and analyzed for TCL (including TICs), TAL metals, and RCRA characteristics (TCLP organics, metals and ignitability). Drums selected for

analysis was based upon a careful review of HAZCAT information generated on the drums as part of the EPA-RPB Removal Action. In general, the waste streams were broken down into two classes: flammable organic liquids, and organic liquids and solids. The drums sampled were overpacked and staged within the warehouse property of the Central Steel & Drum site.

The samples were collected by U.S. EPA and START personnel and submitted to a CLP participating private laboratory for analysis. In-addition, field screening for lead from the ash waste pile area was performed using a X-ray Fluorescence (XRF) unit.

In general, QA/QC samples included the collection of one trip blank, one field duplicate and one matrix spike/matrix spike duplicate sample. Extra sample volume was submitted to allow the laboratory to perform matrix spike sample analysis. This analysis provides information about the effect of sample matrix on digestion and measurement methodology. Field duplicate samples provide an indication of analytical variability and analytical error and were not identified to the laboratory.

This sampling design was based on information currently available and modified on-site in light of field screening results and other acquired information. All deviations from the sampling plan were noted in the Sampling Trip Report (see Attachment II).

Field XRF Screening

The Spectrace Model 9000 XRF unit was used to provide screeing data within the ash waste pile area. XRF sample handling and analysis was conducted in accordance with U.S. EPA-ERT Spectrace 9000 Field Portable X-Ray Fluorescence Operating Procedure: SOP # 1713, as well as the manufacturer's instruction manual. The XRF in-situ method was utilized for this sampling event.

Low, medium and high concntration National Institute of Standards and Technology (NIST) certified Standard Reference Material (SRMs) - (SRMs:2709, 2710, and 2711 respectively) - are measured periodically during the analysis. NIST standards were measured immediately following the initial energy calibration, resolution, and zero background check sequence, every 10 sample measurements and at the end of an analytical run. The standard deviation of the non-consecutive analysis of the low standard (NIST 2709) is used to calculate the Method Detection Limit (MDL) and Method Quantitative Limit (MQL) for the Spectrace 9000 XRFn analysis. The MDL is defined as being 3 times the standard deviation of the non-consecutive analyses of the low standard, whereas the MQL is defined as being 10 times the standard deviation of the non-consecutive analysis of the low standard.

An area for in-situ analysis was prepared by removing large rocks and debris. The soil surface was rendered flat and compact prior to analysis. The Spectrace 9000 probe was held firmly on the ground to maximize instrument contact with the ground. Movement of the probe was minimized during the analysis. A thin layer of 0.2-mil polypropylene XRF film was mounted on the surface to minimize contamination of the probe.

Course-grained soil conditions of contaminated material may preclude a truly representative sample and adversely affect the analysis results (typically by under reporting the target element).

Bassed upon the anticipated action levels, the XRF run times were 30 seconds for the Cd-119 source and 15 seconds each for the Fe-55 and AM-241 sources. Lead was the focus of the XRF screening analysis. These run times provided detection limits of approximately 100 ppm for each analyte. Based uponon the performance of the XRF spectrometer, these run times were modified as required. XRF QA/QC consisted, at a minimum, of one replicate measurement, one duplicate sample, and one NIST standard run for every ten samples.

No confirmation samples were obtained to confirm the XRF results. Therefore, the XRF results will be at a data quality level of QA-1.

4.3 <u>Standard Operating Procedures (SOPs)</u>

4.3.1 Sample Documentation

All sample documents were completed legibly, in ink. Any corrections or revisions were made by lining through the incorrect entry and by initialing the error.

FIELD LOGBOOK/WELL MONITORING LOG

The field logbook/well monitoring log, provides details of site activities and observations so that an accurate account of field procedures can be reconstructed in the writer's absence. All entries were dated and signed by the individuals making the entries, and include (at a minimum) the following:

- 1. Site name and project number.
- 2. Name(s) of personnel on site.
- 3. Dates and times of all entries (military time preferred).
- 4. Descriptions of all site activities, site entry and exit times.
- 5. Noteworthy events and discussions.
- 6. Weather conditions.
- 7. Site observations.
- 8. Sample and sample location identification and description.
- 9. Subcontractor information and names of on-site personnel.
- 10. Date and time of sample collections, along with chain of custody information.
- 11. Record of photographs.
- 12. Site sketches.
- * The description of the sample location was noted in such a manner as to allow the reader to reproduce the location in the field at a later date.

SAMPLE LABELS

Sample labels clearly identified the particular sample, and included the following:

- 1. Site/project number.
- 2. Sample identification number.
- 3. Sample collection date and time.
- 4. Designation of sample (grab or composite).

- 5. Sample preservation.
- 6. Analytical parameters.
- 7. Name of sampler.

Sample labels were written in indelible ink and securely affixed to the sample container. Tie-on labels were used and properly secured.

CHAIN OF CUSTODY RECORD

A chain-of-custody (COC) record was maintained from the time the sample was taken to its final deposition. Every transfer of custody was noted and signed for, and a copy of this record kept by each individual who signed. When samples (or groups of samples) were not under direct control of the individual responsible for them, they were stored in a locked container sealed with a custody seal.

The chain-of-custody record included the following:

- 1. Sample identification number.
- 2. Sample information.
- 3. Sample location.
- 4. Sample date.
- 5. Name(s) and signature(s) of sampler(s).
- 6. Signature(s) of any individual(s) with control over samples.
- * Please refer to Trip Report (Attachment II) for copies of Chain-of-Custody Records.

CUSTODY SEALS

Custody seals were utilized to demonstrate that a sample container had not been tampered with, or opened. The individual in possession of the sample(s) signed and dated the seal, affixing it in such a manner that the container could not be opened without breaking the seal. The name of this individual, along with a description of the sample packaging, was noted in the field logbook/log and trip report.

4.3.2 Sampling Activities

Drum Sampling

Drum sampling activities were conducted in accordance with guidelines outlined in the U.S. EPA-ERT Drum Sampling Standard Operating Procedure (SOP) #2009, and Sampling Equipment Decontamination SOP #2006, see Attachment I, Sampling QA/QC Work Plan..

Solidified Drum Waste/Ash Waste Pile Sampling

The solidified drum waste and/or ash waste pile sampling was conducted in accordance with guidelines outlined in the U.S. EPA-ERT Waste Pile Sampling SOP #2017, and Sampling

Equipment Decontamination SOP #2006, see Attachment I, Sampling QA/QC Work Plan.

XRF Sampling

The XRF sampling was conducted as per U.S. EPA-ERT Spectrace 9000 Field Portable X-Ray Fluorescence Operating Procedure: SOP # 1713, as well as the manufacturer's instruction manual, see Attachment I, Sampling QA/QC Work Plan.

DESCRIPTION OF EVENTS

This report incorporates information generated for sampling performed during the following time periods:

- o March 31, 1998 US EPA Region II ERRD/RAB
- o November 25, 1997 (see Attachment IV, U.S EPA Region II, DESA/MAB RCRA Report)

o March 31, 1998 - US EPA Region II ERRD/RAB

The Region II, U.S. EPA/RPB with technical support from START (Weston) conducted a Time-Critical Removal Action at the Central Steel & Drum site during the months of September 1997 thru June 1998. As part of this action, approximately 260, 55-gallon drums were sampled, characterized (i.e., hazardous characterization, compatibility, and bulking operations) and later overpacked for off-site disposal. In-addition, approximately 1,100 tons of material from the ash waste pile was also characterized for disposal requirements.

During this March 31, 1998, sampling event, a maximum of 20 samples were collected and analyzed for TCL (including TICs), TAL metals, and RCRA characteristics (TCLP organics, metals, and ignitability). Twenty drums were sampled for TCL/TAL analysis; four drums were selected for TCLP (organics & inorganics), and eleven drums were selected for RCRA ignitability characteristic.

Drums selected for analysis was based upon a careful review of HAZCAT information generated on the drums as part of the EPA-RPB Removal Action. In general, the waste streams were broken down into two classes: flammable organic liquids, and organic liquids and solids. The drums sampled were overpacked and staged within the warehouse property of the Central Steel & Drum site.

HAZCAT results were consistent with background information which indicated that Central Steel & Drum received drums from various industries ranging from food to paint manufacturing.

Sampling was initiated and completed on March 31, 1998, with packaging and shipping to the private CLP laboratory performed the same day (see Attachment II, Sampling Trip Report).

The sampling team consisted of Louis DiGuardia (ERRD/RAB), with support from members of START. Sampling procedures followed those described by the approved Sampling QA/QC

Work Plan (Attachment I).

A trip blank, equipment blank, environmental duplicate (MS/MSD) and blind duplicate samples were taken during this sampling event. See Attachment II, Trip Report, for more information on these QA/QC samples.

In-addition, field screening for lead from the ash waste pile area was performed using an X-ray Fluorescence (XRF) unit. See Attachment III, X-Ray Fuorescence Report - April 22, 1998.

o November 25, 1997 - DESA-MAB and NEIC RCRA Sampling Event

In November 25, 1997, samples were collected by U.S. EPA DESA/Monitoring and Assessment Branch and NEIC personnel during a RCRA sampling investigation. Approximately twenty-four, 55-gallon drums were sampled and analyzed for the RCRA ignitability characteristic. The samples were submitted to the US EPA Edison Laboratory for analysis. The full report in included in Attachment IV, U.S EPA Region II, RCRA Report - dated: November 25, 1997.

4.3.3 Sample Handling and Shipment

Each of the sample bottles were sealed and labeled according to the following protocol. Caps were secured with custody seals. Bottle labels contained all required information including site/project code and sample number, time and date of collection, analyses requested, and preservative used. Sealed bottles were placed in large metal or plastic coolers, and padded with an absorbent material such as vermiculite. All packaging conformed to IATA Transportation regulations for overnight carriers.

All sample documents were affixed to the underside of each cooler lid. The lid was sealed and affixed on at least two sides with custody seals so that any sign of tampering was easily visible.

4.4 Disposal of PPE and Contaminated Sampling Materials

All used PPE and disposable sampling equipment was bagged and disposed of by the EPA.

5.0 FINDINGS

In general, the waste streams were broken down into two classes: flammable organic liquids, and organic liquids and solids. The drums sampled were overpacked and staged within the warehouse property of the Central Steel & Drum site.

Waste analysis results is consistent with substances identified during the removal action, paint related waste materials (solids and liquids) consisting of thinners, lacquers, and varnishes. Many of the drums sampled were separated into both solid and liquid phases. EPA requested the contracted laboratory to analyze both phases to support identification of the material and its potential hazard.

Analysis results on the drum samples taken March 31, 1998, indicates the following hazardous

constituents were present in the waste in the following ranges:

TARGET COMPOUND LIST (TCL)

Waste solids: acetone (580 ppb to 1,100,000 ppb); methylene chloride (150 ppb to 490,000 ppb); benzene (4,700 ppb to 8,800 ppb); tetrachloroethene (250 ppb); toluene (1,800 ppb to 23,000,000 ppb); ethylbenzene (170 ppb to 8,800,000 ppb); xylene (840 ppb to 47,000,000 ppb); 2-butanone (160 ppb to 9,500,000 ppb); 4-methyl-2-pentanone (18,000 ppb to 10,000,000 ppb); 2-hexanone (3,400,000 ppb); naphthalene (24,000 ppb to 2,500,000 ppb); 2-methylnaphthalene (480 ppb to 570,000 ppb); fluorene (110,000 ppb); phenanthrene (170,000 ppb to 200,000 ppb); bis(2-ethylhexyl)phthalate (13,000 ppb to 210,000 ppb); and phenol (18,000,000 ppb to 36,000,000 ppb);

Waste liquids: acetone (4 ppb to 9,900 ppb); methylene chloride (4 ppb to 36 ppb); benzene (160 ppb to 270 ppb); toluene (11 ppb to 7,500 ppb); ethylbenzene (24 ppb to 1,100 ppb); xylene (1 ppb to 7,500 ppb); 2-butanone (5 ppb to 12,,000 ppb); 4-methyl-2-pentanone (99 ppb to 490 ppb); naphthalene (42 ppb to 390 ppb); 2-methylnaphthalene (34 ppb to 1,100 ppb); fluorene (120 ppb); phenanthrene (250 ppb); phenol (130 ppb to 5,300 ppb); benzyl alcohol (1,000 ppb to 1,200 ppb); 2-methylphenol (300 ppb to 1,500 ppb); 4-methylphenol (630 ppb to 1,200 ppb); and benzoic acid (620 ppb to 97,000 ppb)

See Table 1a for summary of all analytes and data result qualifiers.

TARGET ANALYTE LIST (TAL)

Waste Solids: chromium (.49 ppm to 1,400 ppm); lead (18.1 ppm to 12,300 ppm) and zinc (5.8 ppm to 203 ppm).

Waste Liquids: chromium (15.2 ppm to 272 ppm); lead (18.4 ppm to 7,760 ppm) and zinc (2.8 ppm to 98,700 ppm).

See Table 1b for summary of all analytes and data result qualifiers.

RCRA TCLP CHARACTERISTIC RESULTS (Organics and Metals)

Waste Solids: methyl ethyl ketone (250 ppb to 520,000 ppb); 2-methyl phenol (8 ppb to 51 ppb); 3+4-methyl phenol (43 ppb to 84 ppb); 2,4-D (2.6 ppb to 13 ppb); arsenic (.0035 ppm); barium (.0307 ppm to .437 ppm); cadium (.00045 ppm to .0091 ppm); chromium (.0013 ppm to .0265 ppm); and lead (.0209 ppm to 10.1 ppm).

Note: Sample 204415 (Drum # D0050) analytical result for methyl ethyl ketone (520,000 ppm), exceeded the TCLP regulatory limit of 200,000 ppb.

Waste Liquids: methyl ethyl ketone (13,000 ppb); 2-methyl phenol (190 ppb); 3+4-methyl phenol (520 ppb); barium (.0645 ppm); cadium (.0143 ppm); chromium (.0255 ppm); selenium (.188 ppm) and lead (.0516 ppm).

See Table 1c for summary of all analytes and data result qualifiers.

RCRA FLASHPOINT CHARACTERISTIC RESULTS

Samples 204404, 204411, 204412, 204415, 204416, and 204417 were identified to have flash points less than 140 F (60 C), are hazardous waste.

In November 25, 1997, samples were collected by U.S. EPA DESA/Monitoring and Assessment Branch and NEIC personnel during a RCRA sampling investigation. Approximately twenty-four, 55-gallon drums were sampled and analyzed for the RCRA ignitability characteristic.

Nineteen of the twenty four samples taken were identified to be hazardous with flash points less than 140 F (60 C). Thes results are consistent with the eresults from this March 31, 1998, sampling event.

The full report is included in Attachment IV, U.S EPA Region II, RCRA Report - dated: November 25, 1997.

XRF Sampling Results

Field screening for lead from the ash waste pile area was performed using an X-ray Fluorescence (XRF) unit. Lead concentration ranged from 167 ppm to 9,480 ppm. These concentration ranges are consistent with the levels found in the drums sampled (18.1 ppm to 12,300 ppm).

See Attachment III, X-Ray Fuorescence Report - April 22, 1998.

6.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

The EPA OSC, Louis DiGuardia, provided overall direction to the staff concerning project sampling needs, objectives, and schedule. The Project Manager (PM), Ray Klimcsak (START), was the primary point of contact with the OSC. The PM was responsible for the development and completion of the Sampling QA/QC Plan, project team organization, and supervision of all project tasks, including reporting and deliverables. The Site QC Coordinator was responsible for ensuring field adherence to the Sampling QA/QC Plan and recording of any deviations. The START Analytical Services Coordinator, Smita Sumbaly, was site contact with the subcontracted laboratory, if necessary.

CLP analyses were arranged for all aqueous samples. START personnel transferred custody of the groundwater samples for shipment to the appropriate CLP laboratory. The raw analytical data from the laboratory was provided to the START Analytical Services Group for data validation.

7.0 QA REQUIREMENTS

The following requirements apply to the respective QA Objectives and parameters identified in

Section 3.0. The QA Protocols for a Level 2 QA objective sampling event are applicable to all sample matrices and include:

- 1. Sample documentation in the form of field logbooks, appropriate field data sheets, and chain of custody records (chain of custody records are optional for field screening locations).
- 2. Calibration of all monitoring and/or field-portable analytical equipment prior to collection and analyses of samples with results and/or performance check procedures/methods summarized and documented in a field, personal, and/or instrument log notebook.
- 3. Field or laboratory determined method detection limits (MDLs) will be recorded along with corresponding analytical sample results, where appropriate.
- 4. Analytical holding times as determined from the time of sample collection through analysis. These will be documented in the field logbook or by the laboratory in the final data deliverable package.
- 5. Initial and continuous instrument calibration data.
- 6. QC blank results (rinsate, trip, method, preparation, instrument, etc.), as applicable.
- 7. Collection and analysis of blind field duplicate and MS/MSD QC samples to provide a quantitative measure of the analytical precision and accuracy, as applicable.
- 8. Use of the following QC procedure for QC analyses and data validation:

Definitive identification - confirm the identification of analytes on 100% of the "critical" samples, via an EPA-approved method; provide documentation such as gas chromatograms, mass spectra, etc.

6.1 DELIVERABLES

The START PM, maintained contact with the EPA OSC, Louis DiGuardia, to keep him informed about the technical and financial progress of this project. This communication commenced with the issuance of the work assignment and project scoping meeting. Ativities under this project were reported in status and trip reports and other deliverables (e.g., analytical reports, final reports) described herein The following deliverables were provided under this project:

TRIP REPORT

A trip report was prepared to provide a detailed accounting of what occurred during each sampling mobilization. Information provided included time of major events, dates, and personnel on site (including affiliations), see Attachment II.

MAPS/FIGURES

Maps depicting site layout, contaminant source areas, and sample locations were included in the trip report, as appropriate, see Figure 1 and Attachment II.

ANALYTICAL REPORT

An analytical report was prepared for samples analyzed under this plan. Information regarding the analytical methods or procedures employed, sample results, QA/QC results, chain of custody documentation, laboratory correspondence, and raw data was provided within this deliverable.

DATA REVIEW

A review of the data generated under this plan was undertaken. The assessment of data acceptability or useability is provided separately as part of the analytical report.

6.2 DATA VALIDATION

Data generated under this QA/QC Sampling Plan was evaluated according to criteria contained in the Removal Program Data Validation Procedures that accompany OSWER Directive number 9360.4-1 and in accordance with Region II guidelines.

Laboratory analytical results was assessed by the data reviewer for compliance with required precision, accuracy, completeness, representativeness, and sensitivity.

6.3 SYSTEM AUDIT

The Field QA/QC Officer observed sampling operations and reviewed subsequent analytical results to ensure compliance with the QA/QC requirements of the project/sampling event.

6.4 CORRECTIVE ACTION

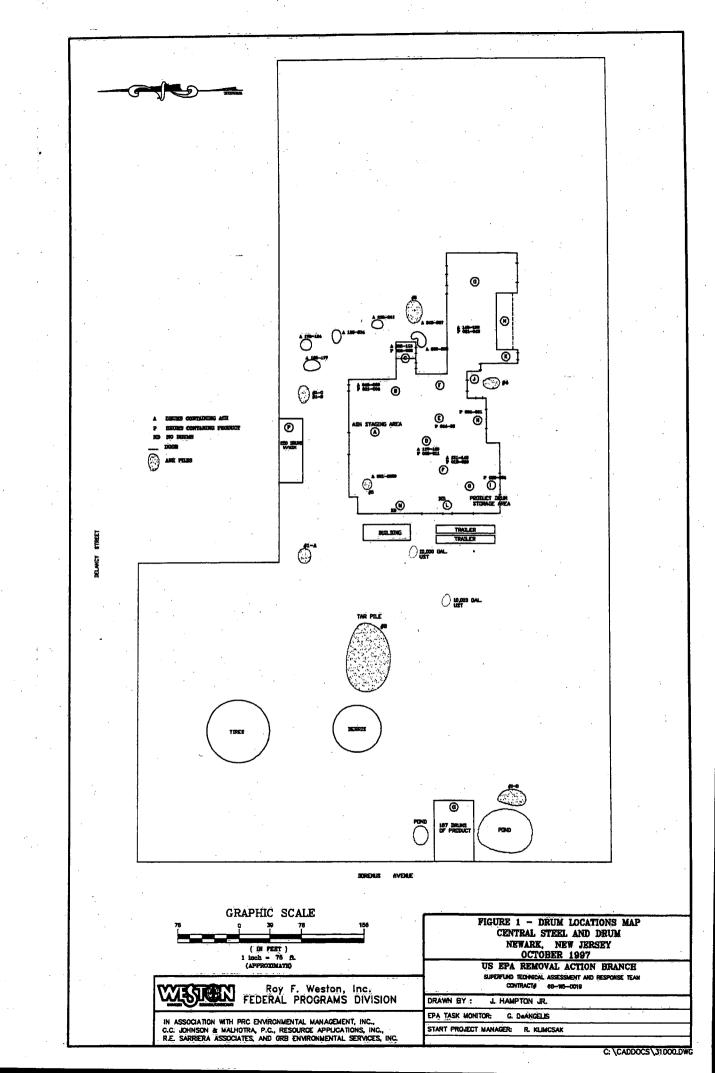
All provisions were taken in the field and laboratory to ensure that any problems that developed were addressed as quickly as possible to ensure the continuity of the project/sampling events. Any deviations from the approved sampling plan were noted in the final report.

CENTRAL STEEL & DRUM SITE 704-738 Doremus Ave. Block 5074, Lot 1 Newark, Essex County New Jersey 07105

Drum/Waste Pile Sampling Event March 31, 1998

Figure 1

Site Map



CENTRAL STEEL & DRUM SITE 704-738 Doremus Ave. Block 5074, Lot 1 Newark, Essex County New Jersey 07105

Drum/Waste Pile Sampling Event March 31, 1998

Table 1a

Summary of March 31, 1998
Target Compound List Analytical Results

Project: Central Steel & Drum

Sampling Date: March 31, 1998

		<u> </u>				SAMPLE	#/C	ONCENT	RAT	rion (µg/l	Kg)
	Method	Waste		Waste		Waste		Waste		Waste	
Volatiles	Detection	204401		204402		204403		204404		204405	
Medium Concentration	Limit (1)	887526		887554		887556		887607		887609	
Percent Moisture	4,	NA NA		NA		NA		NA		NA	
Dilution Factor (2)		16.7		1.0		12.5		25		16.7	
Chloromethane	3100	U	J	U	J	U	Ĵ	U	J	1 U	J
Bromomethane	2000	U	J	Ü	J	Ü	J	Ü	J	Ü	Ĵ
Vinyl Chioride	2700	U	J	U	J	U	J	U	J	u	Ĵ
Chloroethane	2600	U	J	U	J	U	J	Ü	J	ŭ	<u> </u>
Methylene Chloride	1400	U	J	U	J	Ü	J	U		Ü	Ť
Acetone	1300	U	J	580	J	U	J	Ü	J	Ü	
Carbon Disutfide	1800	U	j	U	J	U	J	Ü	J	Ü	Ť
1,1-Dichloroethene	1500	U	J	U	J	U	J	U	j	Ü	J
1,1-Dichloroethane	920	U	J	U	J	U	J "	Ü	J	Ü	Ť
1,2-Dichloroethene (total)	2500	Ü	J	U	J	U	j	U	J	Ü	J
Chloroform	1200	Ü	J	U	J	U	J	U	J	Ü	-
1,2-Dichloroethane	910	U	J	U	J	U	J	Ü	j	Ü	Ĵ
2-Butanone	900	U	J	160	J	U	J	Ü	Ĵ	Ü	J
1,1,1-Trichioroethane	1300	U	J	U	J	U	J	Ü	Ĵ	Ü	J
Carbon Tetrachloride	1100	U	J	Ü	J	U	J	U	J	Ü	J
Bromodichloromethane	1600	Ū	-	U	J	U	J	U	j	Ü	J
1,2-Dichloropropane	160	U	J	U	J	U	J	U	j	Ü	J
cis-1,3-Dichloropropene	1100	U	J	U	J	U	J	U	j	U	j
Trichioroethene	820	U	J	Ü	J	U	J	U	j	U	j
Dibromochloromethane	550	Ų	J	C	J	Ü	J	Ü	Ĵ	Ü	J
1,1,2-Trichloroethane	770	U	J	U	J	Ü	J	Ü	j	Ü	Ĵ
Benzene	1000	8800	J	U	J	4700	J	U	J	Ü	J
trans-1,3-Dichloropropene	1100	Ü	J	U	J	U	J	Ü	j	Ü	J
Bromoform	770	U	J	U	J	Ü	J	U)	Ü	Ĵ
4-Methyl-2-Pentanone	1100	U	Ţ	U	J	U	J	U	7	Ü	J
2-Hexanone	1100	U	J	U	J	U	J	U	J	Ü	
Tetrachloroethene	800	U	J	250	7	U	j	U	j	U	- j
1,1,2,2-Tetrachioroethane	930	U	J	U	J	U	J	Ü	-	Ü	Ť
Toluene	1400	230000	J	8500	J	120000	J	U	٦	Ü	j
Chlorobenzene	1100	U	J	U	J	U	j	U	-	- U	Ĵ
Ethylbenzene	990	110000	J	2900	Ĵ	51000	1	24000	,	11000	J.
Styrene	940	U	J	U	J	260000	j	U	-	U'	j
(ylene (total)	2100	760000	Ţ	20000	J	3000	j	78000	j	39000	Ĵ
/inyl Acetate	1500	U	J	U	J	U	J	U	j	U	J

⁽¹⁾ based on 4 grams of sample extracted with 10 mL of methanol; 100 uL of the extract purged with 5 mL of reagent water

⁽²⁾ compared to the method blank

U - non-detected compound

J - estimated value

Project: Central Steel & Drum

Sampling Date: March 31, 1998

	<u></u>					SAMPLE	#/	UNCENT	<u>KA</u>	110N (µg/l	Kg)
	Method	Waste		Waste		Waste		Waste		Waste	
Volatiles	Detection	204406		204407		204408		204409		204410	
Medium Concentration	Limit (1)	887615		887617		887619		887621		887622	
Percent Moisture		NA		NA		NA		NA		NA NA	
Dilution Factor (2)	j 	1.0		1.0		1.0		200		1000	
Chloromethane	3100	U	J	U	J	U	J	U	J	U	J
Bromomethane	2000	U	J	U	J	U	J	U	J	Ü	J
Vinyl Chloride	2700	Ü	J	U	J	U	J	Ü	J	Ü	J
Chloroethane	2600	U	J	U	J	U	J	U	Ť	Ü	Ĵ
Methylene Chloride	1400	150	J	Ü	J	U	J	Ü	J	Ü	Ť
Acetone	1300	Ü	J	Ü	J	Ü	J	U	J	Ü	J
Carbon Disuffide	1800	U	J	U	J	U	J	U	Ĵ	Ü	J
1,1-Dichloroethene	1500	U	J	U	J	U	J	U	J	U	Ĵ
1,1-Dichloroethane	920	U	J	Ú	J	U	J	U	J	Ü	ij
1,2-Dichloroethene (total)	2500	U	J	U	J	U	J	U	J	Ü	j
Chloroform	1200	U	J	U	j	U	J	Ü	J	U	Ĵ
1,2-Dichloroethane	910	U	J	U	J	U	j	U	J	Ü	J
2-Butanone	900	U	J	Ü	J	U	j	U	J	Ü	J
1,1,1-Trichloroethane	1300	U	J	U	J	U	J	Ú	J	Ü	J
Carbon Tetrachloride	1100	U	J	U	J	U	J	Ü	J	Ü	j
Bromodichloromethene	1600	, U	J	U	J	U	J	Ü	J	Ü	J.
1,2-Dichloropropene	160	U	J	U	J	U	7	Ü	J	Ü	J
cis-1,3-Dichloropropene	1100	U	J	U	J	U	J	υ	J	Ü	J
Trichioroethene	820	Ü	_	U	J	U	7	Ü	J	U	J
Dibromochloromethane	550	Ü	J	U	J	U	J	U *	J	Ü	Ĵ
1,1,2-Trichloroethane	770	U	ſ	Ŭ	J	Ü	J	Ü	J	U	J
Benzene	1000	U	J	Ü	J	U	J	U	J	Ü	Ť
trans-1,3-Dichloropropene	1100	U	7	U	J	Ú	J	Ü	J	U	J
Bromoform	770	U	J	U	J	Ú	Ĵ	Ü	J	U	J
4-Methyl-2-Pentanone	1100	U	J	U	J	Ü	J	U	J	2300000	J
2-Hexanone	1100	U	J	U	٦	Ü	J	C	j	U	j
Tetrachioroethene	800	U	J	U	J	Ü	J	Ü	J	Ü	Ĵ
1,1,2,2-Tetrachloroethane	930	Ü	ſ	U	J	U	J	U	J	U	Ť
Toluene	1400	3300	J	2500	J	1800	J	1100000	J	8400000	j
Chlorobenzene	1100	U	J	U	J	Ü	J	U	J	Ü	J
Ethylbenzene	990	230	J.	170	J	U	J	610000	J	3000000	J
Styrene	940	Ú	J	U	J	U	J	U	J	U	J
Xylene (total)	2100	1100	J	840	J	Ú	J	3400000	7	22000000	J
Vinyl Acetate	1500	U	J	Ú	J	U	J	Ü	j	U	j

⁽¹⁾ based on 4 grams of sample extracted with 10 mL of methanol; 100 uL of the extract purged with 5 mL of reagent water

⁽²⁾ compared to the method blank

U - non-detected compound

J - estimated value

Project: Central Steel & Drum

Sampling Date: March 31, 1998

						SAMPLE	#/C	ONCEN	TRA	TION (µg/l	Ka)
	Method	Waste		Waste		Waste		Waste		Waste	
Volatiles	Detection	204411		204412		204413		204414		204415	
Medium Concentration	Limit (1)	887623		887624		887626		887628		887634	
Percent Moisture] - ' ' '	NA		NA		NA		NA NA		NA NA	
Dilution Factor (2)	<u> </u>	3333		500		500		100		500	
Chloromuthane	3100	U	J	U	J	U	J	U	J	 300	J
Bromomethane	2000	U	J	U	J	Ü	J	Ü	_	U	J
Vinyl Chloride	2700	Ú	J	U	J	U	Ĵ	U	ij	Ü	J
Chloroethane	2600	U	J	U	J	Ū	J	Ü	J	Ü	- j
Methylene Chloride	1400	U	J	Ü	Ĵ	Ü	j	Ü	J	U	J
Acetone	1300	U	J	Ü	J	Ü	J	IJ	J	Ü	
Carbon Disulfide	1800	Ü	J	U	J	U	J	Ü	J	U	J
1,1-Dichloroethene	1500	U	J	U	J	U	J	Ü	Ĵ	U	
1,1-Dichloroethane	920	U	J	U	J	Ü	J	Ū		U	- j
1,2-Dichloroethene (total)	2500	U	J	Ü	J	Ü		Ü	<u>J</u>	Ü	<u> </u>
Chloroform	1200	U	J	Ü	J	Ü	- j-	Ü	 j_	 	J
1,2-Dichloroethane	910	U	J	Ü	J	Ü	J	ΰ	J	Ü	_
2-Butarune	900	U	J	Ü	J	R		Ü	<u></u>	9500000	٠٦
1,1,1-Trichloroethane	1300	U	J	Ü	j	Ü	J	Ü		U	
Carbon Tetrachloride	1100	U	J	Ü	J	Ü	Ť	Ü		Ü	J
Bromodichloromethane	1600	Ū	J	Ü	J	Ü	Ĵ	Ü	j	Ü	 j_
1,2-Dichloropropane	160	Ü	J	U	j	Ü	Ĵ	U	ij	Ü	
cis-1,3-Dichloropropene	1100	Ü	J	U	J	Ü	J	U	j	U	J
Trichloroethene	820	U	J	U	J	Ü	J	U	ij	Ü	
Dibromochloromethane	550	U	J	Ü	J	Ü	- 1	U	-	U	_ j
1,1,2-Trichloroethane	770	Ü	J	Ü	j	U	Ĵ	U		U	<u>.</u>
Benzene	. 1000	U	J	Ü	J	U	j	Ü	-	U	<u>.</u>
trans-1,3-Dichloropropene	1100	U	J	U	j	Ü	J	Ü		U	_ <u>J</u>
Bromoform	770	U	J	Ü	-	Ü	J	Ü	-	Ü	<u>J</u>
4-Methyl-2-Pentanone	1100	Ü	J	Ü	J	180000	<u> </u>	Ü	-	3800000	J
2-Hexanone	1100	U	J	Ü	j	U	-	Ü			٠,
Tetrachloroethene	800	U	J	Ü	Ť	Ü	-	- U	J	Ü	<u>.</u>
1,1,2,2-Tetrachioroethane	930	U	J	U	j	Ü	-	U	7	U	J
Toluene	1400	12000000	7	9200000	j	4600000	- 	110000	<u> </u>		J
Chlorobenzene	1100	Ü	J	U	j	U		i U	,	11000000 U	
thylbenzene	990	7100000	Ť	1800000	j	3200000	- j - 	62000			J
Styrene	940	Ü	J	U	1	U	-	U	J	1300000	J
(ylene (total)	2100	47000000	J	8500000]	17000000	j	350000	- j-	7100000	
/inyl Acetate	1500	Ü	J	U) 	Û	- j 	J350000	<u>, , , , , , , , , , , , , , , , , , , </u>	/100000 U	1

^{* 1: 1000} dilution

⁽¹⁾ based on 4 grams of sample extracted with 10 mL of methanol; 100 uL of the extract purged with 5 mL of the reagent water (2) compared to method blank

⁽⁵⁾ combailed to method Distric

U - non-detected compound

J - estimated value

R - unusable result

Project: Central Steel & Drum

Sampling Date: March 31, 1998

	····					SAMPLE	: #/C	ONCENT	RA	TION (µg/k	(g)
,	Method	Waste		Waste		Waste		Waste		Waste	-
Volatiles	Detection	204416		204417		204418		204419		204420	
Medium Concentration	Limit (1)	887636		887638		887639	•	887640		887641	
Percent Moisture	1	NA.		NA		NA		NA NA		NA NA	
Dilution Factor (2)	ļ	2000		500		1000		1000		1000	
Chloromethane	3100	U	J	U	J	U	J	U	J	U U	J
Bromomethane	2000	U	J	U	J	U	J	Ü	Ĵ	u	j
Vinyl Chloride	2700	U	J	U	J	U	J	Ü	J	U	J
Chloroethane	2600	U	J	U	J	U	J	· U	J	Ü	Ĵ
Methylene Chloride	1400	490000	J	U	J	U	J	U	J	Ü	J
Acetone	1300	780000	J	U	J	820000	J	U	J	1100000	J
Carbon Disulfide	1800	U	J	U	J	U	J	Ü	j	U	J.
1,1-Dichloroethene	1500	Ü	J	U	j	Ü	Ĵ	Ü	J	U	<u> </u>
1,1-Dichloroethane	920	U	J	U	J	U	Ĵ	Ü		Ü	ij
1,2-Dichloroethene (total)	2500	Ü	J	U	J	Ü	J	Ü	J	1 : Ŭ	Ĵ
Chloroform	1200	U	J	U	J	Ū	J	Ü	J	l ü	J
1,2-Dichloroethane	910	U	J	U	J	U	J	Ü	J	l ő	J
2-Butanone	900	R		R		R		R		R	<u> </u>
1,1,1-Trichloroethane	1300	U	J	U	J	Ü	J	U	J	Ü	J
Carbon Tetrachloride	1100	U	j	U	J	Ü	J	Ü	J	Ü	Ť
Bromodichioromethane	1600	U	J	U	J	Ü	J	Ū	J	Ü	J
1,2-Dichloropropene	160	U	J	U	J	U	J	U	J	Ü	-
cis-1,3-Dichloropropene	1100	U	J	U	J	U	J	Ü	J	Ü	J
Trichloroethene	820	Ü	J	U	j	Ü	J	Ü	Ĵ	Ü	Ť
Dibromochloromethane	550	Ü	J	U	J	U	J	Ü	J	Ü	- j-
1,1,2-Trichloroethane	770	U	J	U	J	Ü	J	Ü	J	Ü	J
Benzene	1000	Ü	J	U	J	U	J	U	J	Ü	J
trans-1,3-Dichtoropropene	1100	Ü	J	U	J	U	J	Ü	J	Ü	ij
Bromoform	770	U	J	U	7	U	J	U	Ĵ	Ü	J
4-Methyl-2-Pentanone	1100	U	J	U	J	6200000	J	3300000	Ţ	10000000	J
2-Hexanone	1100	Ú	J	U	J	U	J	3400000	Ť	U	J
Tetrachloroethene	800	U	J	U	J	U	J	U	ij	Ü	j
1,1,2,2-Tetrachloroethane	930	U	j	U	J	Ú	J	U	j	Ŭ	j
Toluene	1400	12000000	J	9700000	J	23000000	J	1200000	J	28000000	J
Chlorobenzene	1100	U	J	U	7	Ú	J	U	J	U	j
Ethylbenzene	990	8800000	J	2200000	1	4100000	J	6000000	J	6700000	J
Styrene	940	Ü	J	U	1	U	J	U	J	Ü	j
Xylene (total)	2100	38000000	-	9200000	J	17000000	J	37000000	-	23000000	ij
Vinyl Acetate	1500	U	7	U	J	U	j	U	1	U	-

⁽¹⁾ based on 4 grams of sample extracted with 10 mL of methanol; 100 uL of the extract purged with 5 mL of the reagent water

⁽²⁾ compared to method blank

U - non-detected compound

J - estimated value

R - unusable result

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998

4-Methylphenol 1300 25000 U								SAMPLE	#/(JUNCEN	IKA	TION (µg	/kg)
Limit (1) 887526 887556 887607	[Method		Waste		Waste		Waste		Waste		Waste	
Section Conc. Several Medium Low Lewel MA NA NA NA NA NA NA NA	Semi-Volatiles	Detection		204401		204402		204403		204404		204405	
Percent Moisture		Limit (1)		887526		887554		887556		887607		1	
Conc. level/Diktion Factor Level med/10 U <td>Percent Moisture</td> <td>Low</td> <td>Medium</td> <td>NA NA</td> <td></td> <td>NA NA</td> <td></td> <td>NA NA</td> <td></td> <td>NA.</td> <td></td> <td>1</td> <td></td>	Percent Moisture	Low	Medium	NA NA		NA NA		NA NA		NA.		1	
Phenol 570 8400 U U U U U U U U U	Conc. level/Dilution Factor	Level	Level	med./10		med./10		~~ med./10		med./10		1	
bie(2-Chloroethyl)ether 590 9100 U	Phenol	570	8400	U		U		U					
2-Chlorophenol 630 10000 U U U U U U U U U U U U U U U U	bis(2-Chloroethyl)ether	590	9100	U	J	U	J	U	J	U			
1,3-Dichlorobenzene 510 9300 U <td>2-Chlorophenol</td> <td>630</td> <td>10000</td> <td>U</td> <td></td> <td>U</td> <td></td> <td>U</td> <td></td> <td>U</td> <td></td> <td>Ü</td> <td></td>	2-Chlorophenol	630	10000	U		U		U		U		Ü	
1,4-Dichlorobenzene 520 9000 U U R U U Beru-Alcohol 550 8400 U	1,3-Dichlorobenzene	510	9300	U		U		U		Ü			:
Benzic Alcohol 550 8400 U U U U U U U U U	1,4-Dichlorobenzene	520	9000	U		U		R		U			
1,2-Dichlorobenzene 590 9400 U <td>Ben: Alcohol</td> <td>550</td> <td>8400</td> <td>U</td> <td></td> <td>U</td> <td></td> <td></td> <td>-</td> <td>Ū</td> <td></td> <td></td> <td></td>	Ben: Alcohol	550	8400	U		U			-	Ū			
2-Methylphenol 650 12000 U	1,2-Dichlorobenzene	590	9400	U		U		U					
2,2-cxybis(1-Chloropropane) 650 9200 U J U J U J U J U J U J U <	2-Methylphenol	650	12000	U		U		U		U			
4-Methylphenol 1300 25000 U	2,2'-oxybis(1-Chloropropane)	650	9200	U	J	U	J	U	J		J		
N-Nitroso-di-n-propytamine 610 9900 U U U R U J U Nitroso-di-n-propytamine 6000 8700 U U U U U U U U U U U U U U U U U U	4-Methylphenol	1300	25000	U		U		Ü					∸
Hexachloroethane	N-Nitroso-di-n-propytamine	610	9900	U		U	· ·	R			J		
Nitrobenzene 680 9900 U	Hexachloroethane	6000	8700	U		U		U		Ü			
Isophorone	Nitrobenzene	680	9900	U		U	-	Ü		U	J		
2.4-Dimethylphenol 610 9600 U	Isophorone	680	8700	U		U		٥	· · · · · ·	Ü	J		一一
2,4-Dimethytphenol 610 9600 U	2-Nitrophenol	620	8000	U		C		U		U	Ť		
Benzoic Acid 1900 33000 U U U U U U U U U	2,4-Dimethylphenol	610	9600	U		U		U		U			
bis(2-Chloroethoxy)methane 670 10000 U J U J U J U J U J U J U J U <	Benzoic Acid	1900	33000	U		٥		U		Ü	7		-
2,4-Dichlorophenol 550 8900 U	bis(2-Chloroethoxy)methane	670	10000	U	J	J	J	U	J				计
1,2,4-Trichlorobenzene 550 9300 U U R U U Naphthalene 680 8200 400000 210000 270000 400000 360000 4-Chloroaniline 690 10000 U <td< td=""><td>2,4-Dichlorophenol</td><td>550</td><td>8900</td><td>Ų</td><td></td><td>. 0</td><td></td><td>U</td><td></td><td></td><td>Ţ</td><td></td><td></td></td<>	2,4-Dichlorophenol	550	8900	Ų		. 0		U			Ţ		
Naphthelene 680 8200 400000 210000 270000 400000 360000 4-Chloroaniline 690 10000 U	1,2,4-Trichlorobenzene	550	9300	Ü		5		R		Ü			
4-Chloroanitine 690 10000 U	Naphthalene	660	8200	400000		210000							
Hexachlorobutadiene 560 10000 U <td>4-Chioroaniline</td> <td>690</td> <td>10000</td> <td>U</td> <td></td> <td>U</td> <td></td> <td>U</td> <td></td> <td></td> <td></td> <td></td> <td>一</td>	4-Chioroaniline	690	10000	U		U		U					一
4-Chloro-3-methylphenol 750 10000 U U U U U U 2-Methylnaphthalene 840 12000 570000 340000 480000 340000 J 310000 . Hexachlorocyclopentadiene 660 26000 U J U J U J U U U	Hexachlorobutadiene	560	10000	IJ		U		U					⇁┨
2-Methylnaphthalene 840 12000 570000 340000 480000 340000 J 310000 . Hexachlorocyclopentadiene 660 26000 U J U J U J U U	4-Chloro-3-methylphenol	750	10000	U		Ú		U		U			
Hexachlorocyclopentadiene 660 26000 U J U J U J U U	2-Methylnaphthalene	840	12000	570000		340000		480000		340000	1		
2.4.6. Triphlessel 4000 2000	Hexachlorocyclopentadiene	660	26000	U	J	U	J		J		Ť		<u> </u>
2,4,6-11icnicroprient 1300 22000 U U U U	2,4,6-Trichlorophenol	1300	22000	_ U		U		U		U	\neg		
2,4,5-Trichlorophenol 1300 28000 U U U U	2,4,5-Trichlorophenol	1300	28000	U		Ū		U					
2-Chloronaphthalene 970 13000 U U U U U	2-Chloronaphthalene	970	13000	U		U					\dashv		\dashv
2-Nitroaniline 1100 16000 U U U U U U	2-Nitroaniline	1100	16000	U		U		Ü	_				
Dimethylphthalate 970 11000 U U U U U	Dimethylphthalate	970	11000	U		U					 		-
Acenaphthylene 750 10000 U U U U U		750	10000	U			\dashv		_		\dashv		$\overline{}$
2,6-Dinitrotoluene 670 12000 U U U U	2,6-Dinitrotoluene	670	12000	U		Ú							\dashv

⁽¹⁾ medium level sample; based on the extraction of 1 gram of the sample with a final volume of 10 mL low level sample; based on the extraction of 30 grams of the sample with a final volume of 1 mL

J - estimated value

U - non-detected compound

R - unusable data

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998

		 			SAMPLE #/	CONCENTRA	ATION (µg/kg)
	Method	,	Waste	Waste	Waste	Waste	Waste
Semi-Volatiles	Detection		204401	204402	204403	204404	204405
	Limit (1)		887526	887554	887556	887607	887609
Percent Moisture	Low	Medium	NA NA	NA	NA NA	NA NA	NA
Conc. level/Dilution Factor	Level	Level	med./10	med./10	med./10	med./10	
3-Nitroaniline	690	26000	U	U	U	U	med./10
Acenaphthene	660	10000	U	U	U	† ŭ -	Ü
2,4-Dinitrophenol	1700	31000	U	U	i ü	Ü	 u
4-Nitrophenol	4500	25000	U	U	Ü	Ü	u u
Dibenzofuran	690	. 11000	U	U	U	1 0	U
2,4-Dinitrotoluene	660	13000	U	U	Ü	1 0	Ü
Diethylphthalate	720	11000	U	U	U ·	- U	Ü
4-Chlorophenyl-phenylether	660	9300	Ü	U	U	U	U
Fluorene	690	9700	U	Ü.	U	110000	110000
4-Nitroaniline	110	33000	U	U	ט	U	
4,6-Dinitro-2-methylphenol	1800	28000	U	Ū	Ü	Ü	U
N-Nitrosodiphenylamine	1400	24000	U	Ü	u u	U U	U
4-Bromophenyl-phenylether	750	13000	U	U	Ü	Ü	Ü
Hexachlorobenzene	770	12000	U	U	Ü	Ü	Ü
Pentachlorophenol	1400	27000	U	U	R	Ü	0 0
Phenanthrene	620	12000	U	Ü	U	200000	170000
Anthracene	740	14000	U	U	Ü	U	_ 170000
Di-n-butylphthalate	770	10000	U	U	U	Ü	U
Fluoranthene	920	13000	U	U	Ü	Ü	U
Pyrene	730	14000	Ü	U	Ü	Ü	U
Butylbenzylphthalate	680	17000	U	U	Ü	Ü	U
bis(2-Ethythexyl)phthalate	750	12000	U	100000 J	Ü	Ü	U
3,3-Dichlorobenzidine	500	16000	U	U	U	U	U
Benzo(a)anthracene	660	14000	U	U	U	U	U
Di-n-octylphthalate	480	12000	U	U	U	Ü	u .
Benzo(b)fluoranthene	770	13000	Ü	U	Ü	ŭ	Ů
Benzo(k)fluoranthene	620	16000	U	U	U	Ü	U
Benzo(a)pyrene	660	13000	U	U	U	Ü	- 0
Indeno(1,2,3-cd)pyrene	460	14000	U	Ü	U	Ü	U
Dibenz(a,h)anthracene	430	13000	U	U	U	Ü	U
Benzo(g,h,i)perylene	620	14000	C	Ü	Ü	Ü	
Chrysene	540	15000	U	Ü	Ü	Ü	- 0

⁽¹⁾ medium level sample: based on the extraction of 1 gram of the sample with a final volume of 10 mL low level sample: based on the extraction of 30 grams of the sample with a final volume of 1 mL

J - estimated value

U - non-detected compound

R - unusable data

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998

						<u> </u>	AMPLE #	/CC	NCENT	RA	FION (µg/l	kg)
	Method		Waste		Waste		Waste		Waste		Waste	
Semi-Volatiles	Detection		204406		204407		204408		204409		204410	
1	Limit (1)		887615		887617		887619		887621		887622	
Percent Moisture	low	medium	NA NA		NA		NA NA		NA		NA	
Conc. level/Dilution Factor	level	level	med./10	٠	med./10		med./10		med/10		med./10	
Phenol	577	8400	U	**	U		U		U		U	
bis(2-Chloroethyl)ether	590	9100	U	J	· · · · · ·		U		U		Ü	
2-Chlorophenol	630	10000	U		U		Ü		Ū		T U	
1,3-Dichlorobenzene	510	9300	U		Ü		Ü	•	Ü		U	
1,4-Dichlorobenzene	520	9000	U		U		U		Ü		u u	
Benzyi Alcohol	550	8400	Ü		U		Ü		U		Ü	
1,2-Dichlorobenzene	590	9400	U		U		Ü		Ü		U	
2-Methylphenol	650	12000	U		U		Ü		Ü		U	
2,2'-oxybis(1-Chloropropane)	650	9200	U		Ü	J	Ü	J	Ü	J	i ü	J
4-Methylphenol	1300	25000	U		Ü		U		Ü		·U	
N-Nitroso-di-n-propylamine	610	9900	U		Ü	J	U	J	Ü	J	U	Ĵ
Hexachioroethane	6000	8700	U		C		U		Ü	<u>_</u>	Ü	
Nitrobenzene	680	9900	U		U	J	U	j	U	J	U	. J
Isophorone	680	8700	Ü	$\neg \neg$	U	J	U	j	U	7	Ü	<u>. , , , , , , , , , , , , , , , , , , ,</u>
2-Nitrophenol	620	8000	Ü	一寸	U		U		U		Ü	
2,4-Dimethylphenol	610	9600	U	÷ 1,	U		U.		Ú		Ü	
Benzoic Acid	1900	33000	U		U	J	Ü	7	. U	J.	Ü	J
bis(2-Chloroethoxy)methane	670	10000	U	J	Ü	J	U	j	U	J	Ü	<u>,</u>
2,4-Dichlorophenol	550	8900	U		U		Ü	<u> </u>	U		U	
1,2,4-Trichiorobenzene	550	9300	U		Ü		U		Ü		U	
Naphthalene	660	8200	U	一	U		U	_	Ū		2500000	
4-Chloroaniline	690	10000	U		U		Ü		U		U	
Hexachlorobutadiene	560	10000	U		U		U		U		U	
4-Chloro-3-methylphenol	750	10000	U		U		U		· Ü		U	
2-Methylnaphthalene	840	12000	Ų		R		R	\dashv	R	_	R	
Hexachlorocyclopentadiene	660	26000	U	J	U		Ü	7	U		Ü	
2,4,6-Trichlorophenol	1300	22000	U _		U		U	_	U		U	
2,4,5-Trichlorophenol	1300	28000	Ü	_	U	$\neg \uparrow$	U	_	U	-	U	
2-Chloronaphthalene	970	13000	U	_	U		Ü	┰	Ü		U	
2-Nitroaniline	1100	16000	Ü		U	ا ز	Ü	7	- U	- , 	U	
Dimethylphthalate	970	11000	U		· U		Ü	-	- U		U	
Acenaphthylene	750	10000	Ú		U	_	Ü	-+	Ü	\dashv	U	
2,6-Dinitrotoluene	670	12000	U		U	\dashv	U	-+	Ū	\dashv	U	

⁽¹⁾ medium level sample; based on the extraction of 1 gram of the sample with a final volume of 10 mL low level sample; based on the extraction of 30 grams of the sample with a final volume of 1 mL

J - estimated value

U - non-detected compound

R - unusable data

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998

		<u></u>	·	8	SAMPLE #/CC	NCENTRA	ΓΙΟΝ (μα/ka)
1	Method		Waste	Waste	Waste	Waste	Waste
Semi-Volatiles	Detection		204406	204407	204408	204409	204410
· · · · · · · · · · · · · · · · · · ·	Limit (1)		887615	887617	887619	887621	887622
Percent Moisture	low	medium	1 NA	NA	NA	NA NA	NA
Conc. level/Dilution Factor	level	level	med./10	med./10	med./10	med./10	med./10
3-Nitroaniline	690	26000	U	Ü	U	U	U U
Acenaphthene	660	10000	U	Ü	U	- U	U
2,4-Dinitrophenol	1700	31000	U	Ü	Ü	ŭ	<u> </u>
4-Nitrophenol	4500	25000	Ü	Ü	Ü	Ü	U
Dibenzofuran	690	11000	Ü	The Desired Property of the Control	l ü	Ü	Ü
2,4-Dinitrotoluene	660	13000	U	Ú	Ü	Ü	Ü
Diethylphthalate	720	11000	U	Ü	Ü	Ü	Ü
4-Chlorophenyl-phenylether	660	9300	U	U	Ü	Ü	Ü
Fluorene	690	9700	U	Ü	Ü	Ü	U
4-Nitroaniline	110	33000	U	Ü	Ü	Ü	U
4,6-Dinitro-2-methylphenol	1800	28000	U	U	Ü	U	Ü
N-Nitrosodiphenylamine	1400	24000	Ü	U	Ü	Ü	Ü
4-Bromophenyl-phenylether	750	13000	Ü	U	U	Ü	Ü
Hexachiorobenzene	770	12000	Ü	U	Ü	Ü	U
Pentachlorophenol	1400	27000	U	UJ	U J	<u> </u>	U J
Phenanthrene	620	12000	Ü	Ü	Ü	U	U J
Anthracene	740	14000	U	U	Ü	U	Ü
Di-n-buty/phthalate	770	10000	U	Ū	Ü	Ü	Ü
Fluoranthene	920	13000	U	U	Ü	Ü	Ü
Pyrene	730	14000	Ü	U	Ü	Ü	<u> </u>
Butylbenzytphthalate	680	17000	U	Ü	Ü	Ü	<u> </u>
bis(2-Ethylhexyl)phthalate	750	12000	U	Ü	Ü	- ŭ	190000
3,3-Dichlorobenzidine	500	16000	U	Ü	U	Ü	U
Benzo(a)anthracene	660	14000	Ü	- U	U	Ü	U
Di-n-octylphthalate	480	12000	U	U	Ü	- ŭ 	U
Benzo(b)fluoranthene	770	13000	U	U	Ü	- ŭ - l	Ü
Benzo(k)fluoranthene	620	16000	U	Ü	Ü	U	Ü
Benzo(a)pyrene	660	13000	U	U	U	Ü	U
ndeno(1,2,3-cd)pyrene	460	14000	Ú	Ü	U	Ü	
Dibenz(a,h)anthracene	430	13000	U	Ŭ	U I	<u> </u>	U
Benzo(g,h,i)perylene	620	14000	Ü	Ü	Ü	<u> </u>	U
Chrysene	540	15000	U	Ü	Ü	U	U

⁽¹⁾ medium level sample: based on the extraction of 1 gram of the sample with a final volume of 10 ml. low level sample: based on the extraction of 30 grams of the sample with a final volume of 1 mL

J - estimated value

U - non-detected compound

R - unusable data

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998

		<u> </u>				<u> </u>	AMPLE #	40 <u>0</u>	NCENIA	AI	ION (µg/k	(g)
	Method		Waste		Waste		Waste		Waste		Waste	D 2"
Semi-Volatiles	Detection		204411		204412		204413		204414		204415	
	Limit (1)		887623		887624		887626		887628		887634	
Percent Moisture	low	medium	NA.		. NA		NA		NA		NA	
Conc. level/Dilution Factor	level	level	med/10		med./10		med_/10		med./10		med./10	
Phenol	570	8400	U		U		Ü		Ü		U	
bis(2-Chloroethyl)ether	590	9100	U		U		U		Ü		Ü	
2-Chlorophenol	630	10000	U		U		U		U		Ü	
1,3-Dichlorobenzene	510	9300	U		U		U		U		Ü	
1,4-Dichlorobenzene	520	9000	U		U		U		U		Ü	
Benzyl Alcohol	550	8400	U		U		U		U		Ü	
1,2-Dichlorobenzene	590	9400	Ü		U		C		U		Ü	
2-Methylphenol	650	12000	U		U		U		U		Ü	
2,2'-oxybis(1-Chloropropane)	650	9200	U	J	U		U	J	U	J	Ü	J
4-Methylphenol	1300	25000	Ú		U		U		U		U	
N-Nitroso-di-n-propytamine	610	9900	U	J	Ų	J	U	J	U	J	U	J
Hexachloroethane	6000	8700	U		U		U		Ü		U	
Nitrobenzene	680	9900	U	ſ	U	J	U	J	Ü,		Ü	
Isophorone	680	8700	U	J	Ų	J	Ü	J	Ų	J	U	J
2-Nitrophenol	620	8000	U		Ų		U		U		U	
2,4-Dimethylphenoi	610	9600	Ü		U		U		. U		C	
Benzoic Acid	1900	33000	U	7	U	J	U	J	U	J	Ü	J
bis(2-Chioroethoxy)methane	670	10000	U	J	U	ì	U	J	Ü	J	Ü	J
2,4-Dichlorophenol	550	8900	U		U		Ü	- " - " - "	U		Ü	····
1,2,4-Trichlorobenzene	550	9300	U		Ü		Ü		U		Ü	
Naphthalene	660	8200	2100000		420000		1500000	-	1000000		U	
4-Chloroaniline	690	10000	U]	Ú		ΰ		U		U	
Hexachlorobutadiene	560	10000	U		U		U		Ü		U	
4-Chloro-3-methylphenol	750	10000	Ú		Ú		U.		U		U	
2-Methylnaphthalene	840	12000	R		R	:	R		200000	J	R	
Hexachlorocyclopentadiene	660	26000	Ų		U		U		C	J	۲	J
2,4,6-Trichlorophenol	1300	22000	U		Ŭ .		U		J		U	7
2,4,5-Trichlorophenol	1300	28000	Ų		Ú		U		U		U	•
2-Chloronaphthalene	970	13000	Ü		Ú		U		U		U	
2-Nitroaniline	1100	16000	U	J	Ü	J	U	J	U	J	U [*]	J
Dimethylphthalate	970	11000	U		U		U		U		U	
Acenaphthylene	750	10000	U		Ü		Ü		U.	$\neg \neg$	Ü	
2,6-Dinitrotoluene	670	12000	U	T	Ü		Ü		U		U	

⁽¹⁾ medium level sample: based on the extraction of 1 gram of the sample with a final volume of 10 mL low level sample: based on the extraction of 30 grams of the sample with a final volume of 1 mL

J - estimated value

U - non-detected compound

R - unusable data

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998

						AMPLE #/CC	MCENTRAL	IUN (µg/kg)
	Method		Waste		Waste	Waste	Waste	Waste
Semi-Volatiles	Detection		204411		204412	204413	204414	204415
• • •	Limit (1)		887623		887624	887626	887628	887634
Percent Moisture	Low	Medium	NA NA		NA	NA	NA	NA NA
Conc. level/Dilution Factor	Level	Level	med./10		med./10	med./10	med./10	med./10
3-Nitroaniline	690	26000	U		U	Ü	U	U
Acenaphthene	660	10000	U		U	U	U	Ü
2,4-Dinitrophenol	1700	31000	U		U	U.	U	Ü
4-Nitrophenol	4500	25000	U		U	U	U	U
Dibenzofuran	690	11000	U		U	U	U	<u></u> ט
2,4-Dinitrotoluene	660	13000	U		U	Ú	U	U
Diethylphthalate	720	11000	U	-	U	U	U	U
4-Chlorophenyl-phenylether	660	9300	U		U ·	U	U	U
Fluorene	690	9700	Ü		U	U	U	U
4-Nitroaniline	110	33000	Ų		Ú	U	U	U
4,6-Dinitro-2-methylphenol	1800	28000	U		Ü	Ú	U	U
N-Nitrosodiphenylamine	1400	24000	U		Ü	Ü	U	U
4-Bromophenyl-phenylether	750	13000	U		U	Ų	U	U
Hexachiorobenzene	770	12000	U		U	U	Ü	U
Pentachlorophenol	1400	27000	U	J	U J	U J	UJ	UJ
Phenanthrene	620	12000	U		U	U	U	U
Anthracene	740	14000	U		U	U	U	U
Di-n-butylphthalate	770	10000	U		Ų	U	U	U
Fluoranthene	920	13000	U		Ú	Ü	U	U
Рутеле	730	14000	U		Ü	Ü	U	U
Butylbenzylphthalate	680	17000	U		Ŭ	U	U	U
bis(2-Ethythexyl)phthalate	750	12000	100000	J	Ü	U	110000 J	Ù
3,3-Dichlorobenzidine	500	16000	J		Ü	U	Ü	U
Benzo(a)anthracene	660	14000	U		Ų	U	U	Ü
Di-n-octylphthalate	480	12000	U		U	U	Ü	U
Benzo(b)fluoranthene	770	13000	U		U	Ü	U	U
Benzo(k)fluoranthene	620	16000	U		Ü	U	J	C
Benzo(a)pyrene	660	13000	٦		Ü	U	U	C
Indeno(1,2,3-cd)pyrene	460	14000	U		Ü	U	U	د
Dibenz(a,h)anthracene	430	13000	U		Ü	Ū	U	C
Benzo(g,h,i)perylene	620	14000	U		U	U	U	U
Chrysene	540	15000	U		U	Ų	U	U

⁽¹⁾ inedium level sample: based on the extraction of 1 gram of the sample with a final volume of 10 mL low level sample: based on the extraction of 30 grams of the sample with a final volume of 1 mL

J - estimated value

U - non-detected compound

R - unusable data

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998

					SAMPLE #/CONCENTRATION (µg/k						
	Method	÷ " " "	Waste	Waste	Waste	Waste	Waste				
Semi-Volatiles	Detection		204416	204417	204418	204419	204420				
	Limit (1)		887636	887638	887639	887640	887641				
Percent Moisture	Low	Medium	NA NA	NA	NA	NA	NA				
Conc. level/Dilution Factor	Level	Level	med./10	med./10	low (2)/700	low (2)/1	low (2)/700				
Phenol	570	8400	U	Ü	18000000	R	36000000				
bis(2-Chloroethyl)ether	590	9100	Ü	Ü	U	R	U				
2-Chiorophenol	630	10000	Ü	. U	U	R	Ü				
1,3-Dichlorobenzene	510	9300	Ü	Ū	U	R	Ū				
1,4-Dichlorobenzene	520	9000	Ü	U	U	R	U				
Benzyl Alcohol	550	8400	U	U	U	R	U				
1.2-Dichlorobenzene	590	9400	U	U	U	R	U				
2-Methylphenol	650	12000	U	U	U	R	U				
2,2-oxybis(1-Chioropropane)	650	9200	U	U J	U	R	U				
4-Methylphenol	1300	25000	U	U	U	R	U				
N-Nitroso-di-n-propylamine	610	9900	Ú	U .	U	R	U				
Hexachloroethane	6000	8700	U	U	U	R	U				
Nitrobenzene	680	9900	U	Ü	U	R	U				
Isophorone	680	8700	U	UJ	U	R	U				
2-Nitrophenol	620	8000	U	U	U	R	Ü				
2,4-Dimethylphenol	610	9600	Ü	U	U	R	Ü				
Benzoic Acid	1900	33000	, C	U	U	R	U				
bis(2-Chloroethoxy)methane	670	10000	U	UJ	U	R	Ü				
2,4-Dichlorophenol	550	8900	Ü	U	U	R	Ü				
1,2,4-Trichlorobenzene	550	9300	U	U	Ü	R	Ú				
Naphthalene	660	8200	630000	370000	U	24000 J	Ü				
4-Chloroaniline	690	10000	Ų	U	U	R	U				
Hexachlorobutadiene	560	10000	U		U	R	U				
4-Chioro-3-methylphenol	750	10000	Ų	U	U	R	U				
2-Methylnaphthalene	840	12000	R	R	Ü	480 J	U				
Hexachlorocyclopentadiene	660	26000	ŲJ	Ü	U	R	U				
2,4,6-Trichlorophenol	1300	22000	U	U	U	R	U				
2,4,5-Trichlorophenol	1300	28000	U	U	U	R	U				
2-Chloronaphthalene	970	13000	Ų	Ü	U	R	U				
2-Nitroaniline	1100	16000	Ü J	UJ	U	R	U				
Dimethylphthalate	970	11000	U	Ü	U	R	U				
Acenaphthylene	750	10000	U	U	Ü	R	U				
2,6-Dinitrotoluene	670	12000	U	U	U	R	U				

⁽¹⁾ medium level sample: based on the extraction of 1 gram of the sample with a final volume of 10 mL low level sample: based on the extraction of 30 grams of the sample with a final volume of 1 mL

⁽²⁾ based on the extraction of 15 grams of the sample with a final volume of 5 mL

J - estimated value

U - non-detected compound

R - unusable data

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998

				<u> </u>	SAIVIPLE #/C	ONCENTRAI	ION (µg/kg)
	Method		Waste	Waste	Waste	Waste	Waste
Semi-Volatiles	Detection	+ 1	204416	204417	204418	204419	204420
	Limit (1)		887636	887638	887639	887640	887641
Percent Moisture	Low	Medium	NA .	NA	NA .	NA	NA
Conc. level/Dilution Factor	Level	Lovel	med./10	med_/10	low (2)/700	low (2)/1	low (2)/700
3-Nitroaniline	690	26000	U	U	Ú	R	U
Acenaphthene	660	10000	Ű	· · · · ·	Ü	R	Ü
2,4-Dinitrophenol	1700	31000	U	Ü	U	R	U
4-Nitrophenol	4500	25000	Ü	U	Ú	R	U
Dibenzofuran	690	11000	U	U	Ü	R	U
2,4-Dinitrotoluene	680	13000	U	Ü	U	R	Ü
Diethylphthalate	720	11000	U	U	Ü	R	Ū
4-Chlorophenyl-phenylether	660	9300	U	U	V	R	U
Fluorene	690	9700	U	V	Ú ·	R	U
4-Nitrosniline	110	33000	U	U	U	R	U
4,6-Dinitro-2-methylphenol	1800	28000	U	U	U	R	U
N-Nitrosodiphenylamine	1400	24000	U	U	U	R	Ü
4-Bromophenyl-phenylether	750	13000	Ú	U	U	R	U
Hexachiorobenzene	770	12000	U	U	U	R	C
Pentachlorophenol	1400	27000	n 1	U J	U	R	Ü
Phenanthrene	620	12000	U	U	Ų	R	Ü
Anthracene	740	14000	U	U	U	R	U
Di-n-butytphthalate	770	10000	U	U	U	5000 J	U -
Fluoranthene	920	13000	U	U	U	R	٥
Pyrene	730	14000	U	U	U	R	Ú
Butylbenzylphthalate	680	17000	U	U.	U	2600 J	U
bis(2-Ethylhexyl)phthalate	750	12000	190000	210000	U	13000 J	Ü.
3,3-Dichlorobenzidine	500	16000	Ü	U	U	R	U
Benzo(a)anthracene	660	14000	Ü.	U	U	R	Ŭ
Di-n-octylphthalate	480	12000	U	U	U	560 J	Ü
Benzo(b)fluoranthene	770	13000	Ú	U	Ü	R	U
Benzo(k)fluoranthene	620	16000	U	Ú _	U	R	U
Benzo(a)pyrene	660	13000	Ú	U	, Ü	R	U
Indeno(1,2,3-cd)pyrene	460	14000	U	Ų	Ų	R	U
Dibenz(a,h)anthracene	430	13000	Ü	U	U	R	U
Benzo(g,h,i)perylene	620	14000	U	Ü	U	R	U
Chrysene	540	15000	Ü	U	U	R	U

⁽¹⁾ medium level sample: based on the extraction of 1 gram of the sample with a final volume of 10 mL low level sample: based on the extraction of 30 grams of the sample with a final volume of 1 mL

⁽²⁾ based on the extraction of 15 grams of the sample with a final volume of 5 mL

J - estimated value

U - non-detected compound

R - unusable data

Project: Central Steel and Drum Site

Sampling Date: March 31, 1998

							SAMPLE	: #/(CONCENTRA	ATION (µg/kg)
	Method		Waste		Waste		Waste		Waste	Waste
Pesticides/PCBs	Detection		204401		204402		204403		204404	204405
,	Limit (1)		887526		887554		887556		887607	887609
Percent Moisture	low	medium	NA .		NA.		NA		NA	NA
conc. level / Dilution Factor	level	level	med./25		med./25		med./25		med./25	med./25
Aldrin	1.0	60	340	J	Ü		Ü		U	U
alpha-BHC	1.0	60	U		U		Ü		U	Ü
beta-BHC	1.0	60	U		Ü		U		Ü	Ü
delta-BHC	1.0	60	Ü		U		U		U	U
gamma-BHC (Lindane) (1.0	60	390	J	υ		340	J	U	U
4,4-DDD	3.5	210	U		U		U		U	U
4,4'-DDE	3.5	-210	400	j	U.		U		U	U
4,4-DDT	3.5	210	J		U		U		U	U
Dieldrin	1.5	90	U		U		U		U	U
Endosulfan I	1.5	90	1900	J	1800	J	U		U	U
Endosulfan II	3.5	210	U		U		U		U	U
Endosulfan Sulfate	2.0	120	U		U		Ú		·U	Ü
Endrin	2.5	150	-		U		U		U	U
Endrin aldehyde	1.0	60	Ü	-	U		U		C	U
Heptachior	1.0	60	700	j	790	J	U	-	U	Ü
Heptachlor epoxide	1.0	60	Ų		Ú		U		U	Ü
Methoxychlor	3.5	210	U		U		U		C	U
Toxaphene	20	1200	C		U		U		U	Ü
Aroclor-1016	20	1200	Ú		U		U		U	U
Aroclor-1221	20	1200	Ú		Ü		U		Ų	U
Aroclor-1232	20	1200	U		U		U		Ü	Ü
Aroclor-1242	20	1200	U		U		U		U	U
Aroclor-1248	20	1200	U		U		U		Ü	U
Aroclor-1254	20	1200	U		U		. U		U	V
Aroclor-1260	20	1200	Ü		U		U		Ú	U
Endrin ketone	2.0	120	U		U		U		U	U
Technical Chlordane	4.0	240	U		U		U		· U	U
gamma-Chlordane	1.0	60	Ū		U		υ		U	U
alpha-Chlordane	1.0	60	Ü	1	Ü		U		Ü	Ü
sodrin	1.0	60	Ü		U		U		U	· U

⁽¹⁾ low level: based on the extraction of 30 grams of the sample with final volume of 5 mL medium level: based on the extraction of 1 gram of the sample with final volume of 10 mL

U - non-detected compound

J - estimated value

JN - presumptive evidence of a compound at an estimated value

R - rejected compound

Project: Central Steel and Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/kg) Method Waste Waste Waste Waste Waste Pesticides/PCBs Detection 204406 204407 204408 204409 204410 Limit (1) 887615 887617 887619 887621 887622 Percent Moisture low medium NA NA NA NA. NA conc. level / Dilution Factor level level med./5 med./5 med./5 med /25 med./2 Aldrin 1.0 60 11 U R alpha-BHC 1.0 60 U u R beta-BHC 1.0 60 U 11. u R delta-BHC 1.0 60 R R u Ū R gamma-BHC (Lindane) 1.0 60 R 170 JN U R 4,4-DDD 3.5 210 U Ú U u R 4,4-DDE 3.5 210 U Ü Ü Ü 4.4'-DDT 3.5 210 Ü 380 J Ū U R Dieldrin 1.5 90 ш Ū Ū R Endosulfan I 1.5 90 370 450 JN U Ū R Endosulfan II 3.5 210 260 Ū U Ü R **Endosulfan Sulfate** 2.0 120 Ū U Ü Ü R 2.5 150 Ũ Ü Ú Ü R Endrin aidehyde 1.0 60 v Ū u П R Heptachior 1.0 60 R R Ü Ū R Heptachlor epoxide 1.0 60 Ü 67 Ū R Methoxychlor 3.5 210 U U Ü Ū R Toxaphene 20 1200 Ü Ü U U Ř Aroclor-1016 20 1200 Ū U u J U Ř Aroclor-1221 20 1200 Ū U Ü R Aroclor-1232 20 1200 U u u Ú R Arocior-1242 20 1200 U Ü U Ū R Aroclor-1248 20 1200 U Ü Ū U R Aroclor-1254 20 1200 Ū Ü ΰ Ū Ŕ Aroclor-1260 20 1200 U Ú U Ū R Endrin ketone 2.0 120 Ü U U R Technical Chlordane 4.0 240 Ū Ū U u R gamma-Chlordane 1.0 60 Ü U u Ū R alpha-Chlordane 1.0 60 350 ĴΝ 430 Ü Ü R Isodrin 870 JN R ΰ R

⁽¹⁾ low level: based on the extraction of 30 grams of the sample with final volume of 5 mL medium level: based on the extraction of 1 gram of the sample with final volume of 10 mL

U - non-detected compound

J - estimated value

JN - presumptive evidence of a compound at an estimated value

R - rejected compound

Project: Central Steel and Drum Site

Sampling Date: March 31, 1998

<u> </u>							SAMPLI	<u>= #/(</u>	ONCEN	IKA	NTION (µg/kg)
,	Method		Waste		Waste		Waste		Waste		Waste
Pesticides/PCBs	Detection		204411		204412		204413		204414		204415
•	Limit (1)		887623		887624		887626		887628		887634
Percent Moisture	low	medium	NA '		NA		NA		NA		NA NA
conc. level / Dilution Factor	level	level	med./2		med./5		med./2		med./2		med./1
Aldrin	1.0	60	180	J	U	*	U	•	U	-	U
alpha-BHC	1.0	60	U		U		U		80	J	Ü
beta-BHC	1.0	60	U		U		150		Ü		U
delta-BHC	1.0	80	U		U		U		U		U
gamma-BHC (Lindane)	1.0	60	23	J	U		Ü		Ü		U
4,4'-DDD	3.5	210	U		U		U		250	J	U
4,4'-DDE	3.5	210	230	J	U		55	J	U		Ú
4,4°-DDT	3.5	210	U		U		700		81	J	U
Dieldrin	1.5	90	Ų		U		U		U		U
Endosulfan I	1.5	90	U		J		U		490	J	U
Endosulfan II	3.5	210	Ü		U		U		U		Ü
Endosulfan Sulfate	2.0	120	Ų		U		U		U		Ü
Endrin	2.5	150	U		U		U		U		Ü
Endrin aldehyde	1.0	60	260		U		180	JN	U		U
Heptachlor	1.0	60	130	JN	U		U		Ü		U
Heptachlor epoxide	1.0	60	R		U		U.		390		U
Methoxychlor	3.5	210	440		U		U		U		U
Toxaphene	20	1200	U		Ú		Ü		U		U
Aroclor-1016	20	1200	U	J	U	J	٧	J	U		U
Aroclor-1221	20	1200	U		U		U		U		U
Aroclor-1232	20	1200	U		U		Ü		U		U
Aroclor-1242	20	1200	U		U		Ü		U		Ü
Aroclor-1248	20	1200	U		U		U		U		Ū
Aroclor-1254	20	1200	U		U		Ü	****	U		U
Aroclor-1260	20	1200	U	J	U	J	Ü	J	U		U
Endrin ketone	2.0	120	U		U		U		150	J	Ü
Technical Chlordane	4.0	240	Ü		Ū		U		Ü		Ü
gamma-Chlordane	1.0	60	U		U		Ü		Ü		Ü
alpha-Chiordane	1.0	60	110	1	U		U	- 1	310		Ū
sodrin	1.0	60	Ü		U		U		240	- 1	Ü

⁽¹⁾ low level: based on the extraction of 30 grams of the sample with final volume of 5 mL medium level: based on the extraction of 1 gram of the sample with final volume of 10 mL

U - non-detected compound

J - estimated value

JN - presumptive evidence of a compound at an estimated value

R - rejected compound

Project: Central Steel and Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/kg) Method Waste Waste Waste Waste Waste Pesticides/PCBs Detection 204416 204417 204418 204419 204420 Limit (1) 887636 227632 887639 887640 887641 Percent Moisture medium NA NA NA NA NA conc. level / Dilution Factor level level med./2 med./1 low (2)/5 low (2)/10 low (2)/5 Aldrin 1.0 60 Ū 26 R u alpha-BHC 1.0 60 U 80 JN 73 JN 21 130 beta-BHC 1.0 60 Ü R R Ũ delta-BHC 1.0 60 U Ū Ü u gamma-8HC (Lindane) 1.0 60 Ü U U Ü ŧΪ 4.4°-DDD 3.5 210 Ü II R Ū 1300 4.4-DDE 3.5 210 u U Ü Ū 4.4-DDT 3.5 210 Ū 760 JN U R Dieldrin 1.5 90 Ū U 16 Ü 16 J Endosulfan i 1.5 90 Ū 44 R 34 J 66 Endosulfan II 3.5 210 U Ū 100 П R **Endosulfan Sulfate** 2.0 120 120 Ü R 270 J 82 Endrin 2.5 150 Ū Ü R U 15 Endrin aldehyde 1.0 60 u Ü R 46 R Heptachlor 1.0 60 U U R Ü U Heptachlor epoxide 1.0 īī Ű Ū Ű U Methoxychlor 3.5 210 U U 480 JN Ū R Toxaphene 20 1200 U 11 U u Ü Aroclor-1016 20 1200 Ū Ű ü U U Araclor-1221 20 1200 Ū Ū U Ū Ü Aroclor-1232 20 1200 Ù U Ū U Ü Aroclor-1242 20 1200 П Ü Ü Ü Aroctor-1248 20 1200 U Ū u Ū Aroctor-1254 20 1200 Ū U Ü u U Aroclor-1260 20 1200 Ū υ u Ü

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Endrin ketone

Technical Chlordane

gamma-Chlordane

alpha-Chlordane

Isodrin

⁽¹⁾ low level: based on the extraction of 30 grams of the sample with final volume of 5 mL medium level; based on the extraction of 1 gram of the sample with final volume of 10 mL

⁽²⁾ based on the extaction of 15 grams of the sample with a final volume of 5 mL

U - non-detected compound

J - estimated value

JN - presumptive evidence of a compound at an estimated value

R - rejected compound

Project: Central Steel and Drum Site

Sampling Date: March 31, 1998

<u> </u>		SAMPLE #/CONCENTRATION											(µg/L)		
	1	Waste		Waste		Waste		Waste		Waste	ļ:	Waste			
	Method	(liquid)).	(liquid)	j	(liquid)		(liquid)		(liquid)	(liquid			
Volatiles	Detection	204401		204402		204403		204405		204406		20440			
Low Concentration	Limit	887540	_			887572		887610		887616		887618			
Percent Moisture		_		887555							•	00/010	•		
Dilution Factor		10.5		2.5		111.0		1.0		1.0		1.4			
Chloromethane	15	Ü	J	U	J	U	J	U	J	Ü	J	Ü	J		
Bromomethane	10	Ü	J	U	J	U	J	Ü	Ť	Ü	J	U	j		
Vinyl Chloride	10	U	J	U	J	Ü	J	Ü	J	Ü	Ť	Ü	J		
Chloroethane	10	Ü	J	U	J	Ü	Ĵ	U	Ĵ	Ü	J	Ü	J		
Methylene Chloride	10	30	J	18	J	U	Ĵ	30	J	4	Ĵ	4	Ĵ		
Acetone	15	1700	J	280	J	9900	J	38	J	44	J	85	J		
Carton Disulfide	10	U	J	U	J	U	J	U	J	U	Ť	Ü	j		
1,1-Dichloroethene	5	U	J	U	J	Ü	J	U	J	Ü	j	Ü	J		
1,1-Dichloroethane	5	C	J	U	J	U	Ĵ	Ü	J	Ü	J	U	J		
1,2-Dichloroethene (total)	10		J	U	J	U	J	Ü	J	U	j	Ü	J		
Chloroform	5	U	7	U	7	U	J	Ü	J	Ü	J	Ü	j		
1,2-Dichloroethane	5	U	J	U	J	U	J	U	J	U	J	U	j		
2-Butanone	20	1500	J	180	7	12000	J	17	J	71	J	110	J		
1,1,1-Trichioroethane	10	U	J	3	J	U	J	U	J	Ü	j	Ü	J		
Carbon Tetrachloride	10	U	J	U	J	U	J	U	Ĵ	Ü	J	U	J.		
Bromodichloromethane	10	U	J	U	J	U	J	Ü	J	Ü	J	Ü	J		
1,2-Dichloropropane	10	U	J	U	J	U	J	U	7	U	J	Ü	J		
cis-1,3-Dichloropropene	15	U	J	U	J	U	Ĵ,	U	7	J	J	Ü	J		
Trichloroethene	5	U	<u>د</u>	Ü	7	U	J	U	J	U	J	U	J		
Dibromochloromethane	10	U	٦	U	J	U	J	Ü	J	U	J	U	J		
1,1,2-Trichloroethane	5	U	7	U	J	Ú	J	U	-	Ü	J	U	J		
Benzene	10	160	J	U	J	Ü	J	U	J	U	J	U	J		
trans-1,3-Dichloropropene	10	Ú	7	U	J	Ü	J	U	J	U	7	U	J		
Bromoform	10	U	J	U.	J	Ü	7	U	J	Ü	J	U	J		
4-Methyl-2-Pentanone	10	U	J	99	J	490	J	U	J	150	J	210	J		
2-Hexanone	15	U	J	Ų	J	U	J	U	J	U	J	U	J		
Tetrachloroethene	10	Ü	J	Ü	J	Ü	J	U	J	U	J	Ü	Ĵ		
1,1,2,2-Tetrachloroethane	10	U	J.	U	J	Ü	J	U	J	U	J	Ü	J		
Toluene	5	1700	J	270	J	360	j	Ų	J	14	J	11	7		
Chlorobenzene	10	U	J	U	J	U	J	U	J	U	J	U	J		
Ethylbenzene	10	210	J	24	J	U	J	Ú	J	U	J	U	J		
Styrene	5	U	J	U	J	U	J	Ú	기	Ü	J	Ü	Ť		
Total Xylenes	15	1400	J	150	J	190	J	32	J	1	J	Ū	7		
Vinyl Acetate	10	U	ग	Ú	J	U	J	U	J	Ü	1	Ü	J		

U - non-detected compound

J - estimated value

Project: Central Steel and Drum Site

Sampling Date: March 31, 1998

SAMPLE #/CONCENTRATION (µg/L) Waste Waste Method (liquid) (liquid) Volatiles Detection 204408 204414 Low Concentration Limit 887620 887630 Percent Moisture Dilution Factor 1.0 40.0 Chloromethane 15 Ü Ü Bromomethane 10 u J U J Vinyl Chloride 10 Ü Ü Chloroethane 10 Ū J Ü J Methylene Chloride 10 36 J Ü Acetone 15 20 J 1500 Ĵ Carbon Disulfide 10 Ū J U J 1,1-Dichlorcethene 5 Ü J Ū J 1,1-Dichloroethane 5 Ü Ĵ ū 1,2-Dichloroethene (total) 10 U U Chloroform 5 Ü Ū J 1,2-Dichloroethane 5 Ü Ū J 2-Butanone 20 5 1200 J 1,1,1-Trichloroethane 10 J U J Carbon Tetrachiorida 10 U J U J Bromocichioromethane 10 Ū J Ū J 1,2-Dichloropropane 10 Ü J Ū J cis-1,3-Dichloropropene 15 Ū J Ü Ĵ Trichloroethene 5 ū J Ü Ĵ Dibromochloromethane 10 Ü U J 1,1,2-Trichloroethane 5 Ū Ū J Benzene 10 Ū J 270 J trans-1,3-Dichloropropene 10 Ū Ū J **Bromoform** 10 J U J 4-Methyl-2-Pentanone 10 10 J Ū J 2-Hexanone 15 Ū J Ü Tetrachioroethene 10 Ū Ü 1,1,2,2-Tetrachloroethane 10 Ü Ū Toluene 5 52 7500 Chlorobenzene 10 Ū Ĵ **Ethylbenzene** 10 U 1100 J Styrene 5 Ū 7 U J Total Xylenes 15 Ū J 7500 Vinyl Acetate

U - non-detected compound

J - estimated value

Project: Central Steel and Drum Site

Sampling Date: March 31, 1998

	,						#/C	UNCENTR	ATION (µg/L)
		Waste		Waste	-	Waste		Waste	Waste
	Method	(liquid)		(liquid)		(liquid)		(liquid)	(liquid)
Semi-Volatiles	Detection	204401		204402		204403		204405	204406
Low Concentration	Limit (1)	887540		887555		887572		887610	887616
Percent Moisture	` ′	_		_		-		337010	00/010
Sample Vol./Dilution Factor		(2)/1		(2)/1		(3)/1		(4)/1	(5)/1
Phenol	15	1400		Ü		5300	· · · · ·		U (S)/1
bis(2-Chloroethyl)ether	20	Ü		U		U		ŭ	U
2-Chlorophenol	15	U	-	U		Ü		Ü	1 0
1,3-Dichlorobenzene	10	U		U		Ŭ		Ü	Ü
1,4-Dichlorobenzene	10	Ü		U		Ü		Ü	
Benzyl Alcohol	20	1200	•	U		1000	J	Ü	U
1,2-Dichlorobenzene	10	U		U		Ü		u	U
2-Methylphenol	20	440	-	Ü		300	J	Ü	Ü
2,2-oxybis(1-Chloropropane)	15	U		Ü		U		Ü	Ü
4-Methylphenol	35	630		Ü		680	J	U	Ü
N-Nitroso-di-n-propylamine	20	U		Ü		Ü		U	Ü
Hexachloroethane	10	U		Ü		Ü		Ü	
Nitrobenzene	10	U		Ü	-	Ü		Ü	
sophorone	10	U.		Ü		Ū		Ü	U
2-Nitrophenol	5	U		Ü		Ü	-	Ü	U
2,4-Dimethylphenol	35	U		Ü		Ü		Ü	Ü
Benzoic Acid	95	25000	•	620	J	97000		R	R
bis(2-Chloroethoxy)methane	15	U		U	Ť	U		Ü	 "
2,4-Dichlorophenol	15	U	_	Ü		Ü		Ü	Ü
1,2,4-Trichlorobenzene	5	U	1	Ü		Ü		Ü	$\frac{1}{0}$
Vaphthalene	5	110		42	J	130	- 1	290	 0
1-Chloroaniline	5	U		Ú		U		<u> </u>	Ü
lexachlorobutadiene	5	· U	\neg	U		Ü	\dashv	Ŭ	
l-Chloro-3-methylphenol	10	U		Ü		Ü		Ü	 U
-Methylnaphthalene	10	75	J	34	J	150	- ,	1100	U
iexachlorocyclopentadiene	25	U	_	Ü	Ť	Ü	-	U	U
,4,6-Trichlorophenol	25	U	$\neg \uparrow$	U		U		- ŭ	Ü
.4,5-Trichlorophenol	25	U	\neg	U		U		Ü	
-Chioronaphthalene	15	U	1	U		Ü	\dashv	Ü	U
-Nitroaniline									
	20	U		Ü	·]	. 11	J	11	11
imethylphthalate		U	\dashv	Ü		U		U	Ü
	20		+			U		U U	U

^{1:30} dilution * 1:20 dilution

- (2) Based on the extraction of 50 mL of the sample to a final volume of 0.5 mL; equivalent to 10x dilution compared to method blank
- (3) Based on the extraction of 5 mL of the sample to a final volume of 0.5 mL; equivalent to 100x dilution compared to method blank
- (4) Based on the extraction of 25 mL of the sample to a final volume of 0.5 mL; equivalent to 20x dilution compared to method blank (5) Based on the extraction of 10 mL of the sample to a final volume of 0.5 mL; equivalent to 50x dilution compared to method blank
- (6) Base on the extraction of 20 mL of the sample to a final volume of 0.5 ml; equivalent to 25x dilution compared to method blank

- U non-detected compound
- J estimated value
- R Unusable result

⁽¹⁾ Based on the extraction of 1000 mL of the sample to a final volume of 1 mL. Deviation will change the method detection limit. See (2) through (6). Dilution factor stays at 1 unless dilution was made after sample extraction procedure.

X - indistinguishable coeluting isomers in the sample; the value is the estimated maximum possible concentration

Project: Central Steel and Drum Site

Sampling Date: March 31, 1998

				SAIVIPLE #/L	UNCENTRA	HON (µg/L)
		Waste	Waste	Waste	Waste	Waste
	Method	(liquid)	(liquid)	(liquid)	(liquid)	(liquid)
Semi-Volatiles	Detection	204401	204402	204403	204405	204406
Low Concentration	Limit (1)	887540	887555	887572	887610	887616
Percent Moisture	7	-	_	1 55,5,2	0.07.010	007010
Sample Vol./Dilution Factor		(2)/1	(2)/1	(3)/1	(4)/1	(5)/1
3-Nitroanitine	30	Ú	U	- U	U	U
Acenaphthene	10	U	\ U	· Ü	U	Ü
2,4-Dinitrophenol	75	U	U	U	Ü	ŭ
4-Nitrophenol	45	U	U	U	Ŭ J	U J
Dibenzofuran	10	U	U	Ü	U	Ü
2,4-Dinitrotoluene	10	U	Ü	U	Ü	Ü
Diethylphthalate	15	U	U	U	U	Ü
4-Chlorophenyl-phenylether	10	Ü	U	U	Ù	Ü
Fluorene	10	U	U	U	120 J	Ü
4-Nitroaniline	35	U	U	Ü	Ü	U
4,6-Dinitro-2-methylphenol	45	U	Ú	U	Ü	Ü
N-Nitrosodiphenylamine	30	U	U	U	U	Ü
4-Bromophenyl-phenylether	15	U	U	U	U	Ü
Hexachlorobenzene	15	U.	U	Ü	U	U
Pentachiorophenol	55	Ü	U	U	U	Ü
Phenanthrene	15	U	U	Ü	250 J	U
Anthracene	15	U	U	U	31 J	U
Di-n-butylphthalate	15	U	Ú	U	U	Ü
Fluoranthene	20	UJ	UJ	UJ	29 J	Ū
Pyrene	10	U	U	U	55 J	U
Butylbenzylphthalate	10	U	U	U	U	Ū
bis(2-Ethylhexyl)phthalate	25	U	U	U	U	Ü
3,3-Dichlorobenzidine	10	U	U	U	Ü	U
Benzo(a)anthracene	10	U	U	Ü	23 J	Ü
Di-n-octylphthalate	20	U	U	U	U	U
Benzo(b)fluoranthene	10	U	Ŭ	U	27 XJ	U
Benzo(k)fluoranthene	20	U	Ü	U	28 XJ	U
Benzo(a)pyrene	5	U	U	U	U	Ü
Indeno(1,2,3-cd)pyrene	10	Ü	Ų	U	U	U
Dibenz(a,h)anthracene	10	U	Ú	U	U	U
Benzo(g,h,i)perylene	10	Ū	U	Ú	U	Ü
Chrysene	15	U	U	U	41 J	Ū

⁽¹⁾ Based on the extraction of 1000 mL of the sample to a final volume of 1 mL. Deviation will change the method detection limit. See (2) through (6). Dilution factor stays at 1 unless dilution was made after sample extraction procedure.

⁽²⁾ Based on the extraction of 50 mL of the sample to a final volume of 0.5 mL; equivalent to 10x dilution compared to method blank

⁽³⁾ Based on the extraction of 5 mL of the sample to a final volume of 0.5 mL; equivalent to 100x dilution compared to method blank

⁽⁴⁾ Based on the extraction of 25 mL of the sample to a final volume of 0.5 mL; equivalent to 20x dilution compared to method blank

⁽⁵⁾ Based on the extraction of 10 mL of the sample to a final volume of 0.5 mL; equivalent to 50x dilution compared to method blank

⁽⁶⁾ Base on the extraction of 20 mL of the sample to a final volume of 0.5 ml; equivalent to 25x dijution compared to method blank

X - indistinguishable coeluting isomers in the sample; the value is the estimated maximum possible concentration

U - non-detected compound

J - estimated value

R - Unusable result

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998

F-0						#/ <u>C</u>	UNCENTRAI	ION (Hg/L)
		Waste	Waste		Waste			
	Method	(liquid)	(liquid)		(liquid)			
Semi-Volatiles	Detection	204407	204408		204414			
Low Concentration	Limit (1)	887618	887620		887630			
Percent Moisture	7 ``	-	_		_			
Sample Vol./Dilution Factor	:	(6)/1	(2)/1		(2)/2		·	
Phenol	15	ΰ	130	J	1800			
bis(2-Chloroethyl)ether	20	U	U		U	J		
2-Chlorophenol	15	U	16	J	Ü			······································
1,3-Dichlorobenzene	10	U	U		Ü			
1,4-Dichlorobenzene	10	U	U		U			
Benzyl Alcohol	20	U	U		U			
1,2-Dichlorobenzene	10	Ü	U	7.2.	Ü			
2-Methylphenol	20	U	16	J	1500			
2,2'-oxybis(1-Chloropropane)	15	U	U		U	J		
4-Methylphenoi	35	U	U		1200			
N-Nitroso-di-n-propytemine	20	Ü	Ü		Ü			
Hexachioroethane	10	U	U		U			
Nitrobenzene	10	U	U	**	U			
Isophorone	10	U	U		U	J		
2-Nitrophenal	5	U	U		U			
2,4-Dimethylphenol	35	U	U,		550	J		
Benzoic Acid	95	36 J	R		R		- 1/4	
bis(2-Chloroethoxy)methane	15	U	U		U	J		
2,4-Dichlorophenol	15	U	Ú		Ü	•		
1,2,4-Trichlorobenzene	5	U	Ú		Ü			
Naphthalene	5	U	120		390			
4-Chloroaniline	5	U	Ú		U			
Hexachlorobutadiene	5	U'	U		U			
4-Chloro-3-methylphenol	10	Ú	U		U			
2-Methylnaphthalene	10	U	U .		170	7		
Hexachlorocyclopentadiene	25	U	U		U	J		
2,4,6-Trichlorophenol	25	Ü	59	J	Ü			
2,4,5-Trichlorophenol	25	U	Ü		U			
2-Chloronaphthalene	15	U.	U		U			
2-Nitroaniline	20	U	U		Ü	J		
Dimethylphthalate	10	Ü	U		U	-		
Acenaphthylene	10	Ü	U		U			
2,6-Dinitrotoluene	15	U	U		U	$\neg \neg$		

⁽¹⁾ Based on the extraction of 1000 mL of the sample to a final volume of 1 mL. Deviation will change the method detection limit. See (2) through (6). Dilution factor stays at 1 unless dilution was made after sample extraction procedure.

- (2) Based on the extraction of 50 mL of the sample to a final volume of 0.5 mL; equivalent to 10x dilution compared to method blank
- (3) Based on the extraction of 5 mL of the sample to a final volume of 0.5 mL; equivalent to 100x dilution comapred to method blank
- (4) Based on the extraction of 25 mL of the sample to a final volume of 0.5 mL; equivalent to 20x dilution compared to method blank
- (5) Based on the extraction of 10 mL of the sample to a final volume of 0.5 mL; equivalent to 50x dilution compared to method blank
- (6) Based on the extraction of 20 mL of the sample to a final volume of 0.5 ml; equivalent to 25x dilution compared to method blank

U - non-detected compound

J - estimated value

R - Unusable result

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998

					CONCENTRAT	ION (µg/L)
·		Waste	Waste	Waste		
	Method	(liquid)	(liquid)	(liquid)		
Semi-Volatiles	Detection	204407	204408	204414	ľ	
Low Concentration	Limit (1)	887618	887620	887630		
Percent Moisture	۱ (۱۰ ا	-	007020	007050		
Sample Vol./Dilution Factor	1 1	(6)/1	(2)/1	(2)/2		
3-Nitroaniline	30	/ \ 	U	U		
Acenaphthene	10	Ü	Ü	l ü		
2,4-Dinitrophenol	75	Ü	U	l ü j		
4-Nitrophenol	45	Ū J	<u> </u>			
Dibenzofuran	10	U	Ü	Ü		
2.4-Dinitrotoluene	10	U	Ü	1 0		
Diethylphthalate	15	Ü	Ü	110 J		
4-Chlorophenyl-phenylether	10	U	U U	110	-	
Fluorene	10	U	Ü	 	_	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
4-Nitroaniline	35	Ü	Ü	1 0	·	
4,6-Dinitro-2-methylphenol	45	Ū	Ü	l ŭ		
N-Nitrosodiphenylamine	30	Ü	Ü	36 J		
4-Bromophenyl-phenylether	15	Ū	T T	 30 3		
Hexachlorobenzene	15	Ū	Ŭ	1 - 0		
Pentachiorophenol	55	U	Ü	Ü		
Phenanthrene	15	U	Ŭ	l ŭ		
Anthracene	15	U	Ü	U		
Di-n-butylphthalate	15	Ü	U	Ü	 	
Fluoranthene	20	Ü	Ü	Ü	 	-
Pyrene	10	U	Ü	i i		
Butylbenzylphthalate	10	U	Ü	i ŭ		······································
bis(2-Ethylhexyl)phthalate	25	U	Ü	Ü		
3,3-Dichlorobenzidine	10	U	Ü	Ü		
Benzo(a)anthracene	10	U	U	T U	 	
Di-n-octylphthalate	20	U	Ü	l ő -	 	
Benzo(b)fluoranthene	10	U	Ü	Ü		· · · · · · · · · · · · · · · · · · ·
Benzo(k)fluoranthene	20	Ü	Ü	Ü	 	
Benzo(a)pyrene	5	Ü	U	Ü		
Indeno(1,2,3-cd)pyrene	10	Ü	U	Ü		
Dibenz(a,h)anthracene	10	U	Ü	1 0		
Benzo(g,h,i)perylene	10	Ü	Ü	1 0		
Chrysene	15	Ü	Ü	Ü		

⁽¹⁾ Based on the extraction of 1000 mL of the sample to a final volume of 1 mL. Deviation will change the method detection limit. See (2) through (6). Dilution factor stays at 1 unless dilution was made after sample extraction procedure.

⁽²⁾ Based on the extraction of 50 mL of the sample to a final volume of 0.5 mL; equivalent to 10x dilution compared to method blank

⁽³⁾ Based on the extraction of 5 mL of the sample to a final volume of 0.5 mL; equivalent to 100x dilution comapred to method blank

⁽⁴⁾ Based on the extraction of 25 mL of the sample to a final volume of 0.5 mL; equivalent to 20x dilution compared to method blank

⁽⁵⁾ Based on the extraction of 10 mL of the sample to a final volume of 0.5 mL; equivalent to 50x dilution compared to method blank

⁽⁶⁾ Base on the extraction of 20 mL of the sample to a final volume of 0.5 ml; equivalent to 25x dilution compared to method blank

U - non-detected compound

J - estimated value

R - Unusable result

Project: Central Steel and Drum Site

Sampling Date: March 31, 1998

				SAMPLE #/	CONCENTRA	NION (µg/L)
		Waste	Waste	Waste	Waste	Waste
	Method	(liquid)	(liquid)	(liquid)	(liquid)	(liquid)
Pesticides	Detection	204401	204402	204403	204405	204406
Low Concentration	Limit (1)	887540	887555	887572	887610	887616
Percent Moisture		NA NA	NA NA	NA NA	NA NA	NA NA
Sample vol / Dilution Factor		(2)/1.0	′2)/1.0	(3)/1.0	(4)/1.0	(5)/1.0
Aldrin	0.10	2.4 J	U U	U	U U	U (3/1.0
alpha-BHC	0.02	U	U	3.4 J	Ü	- u
beta-BHC	0.10	U	Ü	U	U	 U
detta-BHC	0.10	U	0.25 J	U	Ŭ	1 <u> </u>
gamma-BHC (Lindane)	0.05	U	0.35 J	4.4 J	ŭ	U
4,4'-DDD	0.50	U	U	U	Ü	
4,4-DDE	0.10	Ü	U	Ü	Ü	Ü
4,4-DDT	0.05	U	0.71 J	Ü	Ú	U
Dieldrin	0.05	0.92 J	U	Ü	Ü	U
Endosulfan i	0.05	U	Ü	U	ŭ	l u
Endosulfan II	0.10	U	U	U	Ü	U
Endosulfan Sulfate	0.15	U	U	U	Ü	U
Endrin	0.10	U	U	Ü	Ū	Ü
Endrin aldehyde	0.75	U	0.84 J	Ü	Ü	Ü
Heptachlor	0.05	U	0.28 J	5.5 J	Ü	0.49 J
Heptachlor epoxide	0.05	Ü	0.77 J	U	U	U U
Methoxychior	0.50	U	U	U	Ü	U
Toxaphene	5.0	U	U	Ü	U	Ü
Aroclor-1016	0.50	U	U	U	U	U
Aroclor-1221	1.0	Ü	U	U	U	Ü
Aroclor-1232	1.5	Ú	Ü	U	Ü	Ü
Aroclor-1242	1.0	Ü	U	U	Ü	Ü
Aroclor-1248	1.5	U	U	U	Ü	Ü
Aroclor-1254	1.0	U	U	U	Ü	Ü
Aroclor-1260	0.50	U	Ü	Ü	Ü	U
Endrin ketone	0.05	U	U	Ü	Ü	Ü
Technical Chlordane	0.25	U	Ü	Ū	Ü	Ü
gamma-Chlordane	0.05	U	U	Ü	Ü	U
ilpha-Chiordane	0.05	U	Ü	Ü	Ü	U
sodrin	10	1.2 J	U	ü	Ü	U

⁽¹⁾ Based on the extraction of 1000 mL of sample to a final volume of 10 mL. Deviation will change the method detection limit. See (2) through (6). Dilution factor stays at 1 unless dilution was made after sample extraction procedure.

⁽²⁾ Based on the extraction of 50 mL of sample to a final volume of 10 mL; equivalent to 20x dilution compared to method blank

⁽³⁾ Based on the extraction of 5 mL of sample to a final volume of 10 mL; equivalent to 200x dilution compared to method blank

⁽⁴⁾ Based on the extraction of 25 mL of sample to a final volume of 10 mL; equivalent to 40x dilution compared to method blank

⁽⁵⁾ Based on the extration of 10 mL of sample to a final volume of 10 mL; equivalent to 100x dilution compared to method blank

⁽⁶⁾ Based on the extraction of 20 mL of sample to a final volume of 10 mL; equivalent to 50x dilution compared to method blank

U - non-detected compound

J - estimated value

R - rejected compound

Project: Central Steel and Drum Site

Sampling Date: March 31, 1998

	·			SAMPLE #/CUNCENTRATION (
,		Waste	Waste	Waste		
	Method	(liquid)	(liquid)	(liquid)		
Pesticides	Detection	204407	204414	204408		
Low Concentration	Limit (1)	887618	887630	887620		
Percent Moisture		NA NA	NA NA	NA NA	·	
Sample vol / Dilution Factor	·	(6)/1.0	(2)/1.0	(2)/1.0		
Aidrin	0.10	U	U	U U		
alpha-BHC	0.02		J Ü	U		
beta-BHC	0.10	Ü	Ŭ	1 0		
delta-BHC	0.10	Ü		Ů		
gamma-BHC (Lindane)	0.05	Ú	0.50 J			
4,4'-DDD	0.50		J U	Ť	-	
4,4-DDE	0.10	U	U	Ü	** ** ***	
4,4-DDT	0.05	U	<u> </u>	Ü		
Dieldrin	0.05	R	Ü	Ü		
Endosulfan I	0.05	- U	Ü	Ü	w w	
Endosulfan il	0.10	R	U	Ü	. ;	
Endosulfan Sulfate	0.15		Ü	i ŭ		
Endrin	0.10	U	U	Ū		
Endrin aldehyde	0.75	4.9	J U	U		-
Heptachlor	0.05	R	U	U		
Heptachlor epoxide	0.05	Ü	Ü	U		
Methoxychlor	0.50	U	U	Ü		
Tomphene	5.0	U	U	U		
Aroclor-1016	0.50	U	U	U		
Arocior-1221	1.0	U	Ü	U		
Aroclor-1232	1.5	Ü	U	Ü		
Arocior-1242	1.0	U	U	U U		
Aroclor-1248	1.5	U	U	U		
Aroclor-1254	1.0	U	U	U		
Aroclor-1260	0.50	U	U	U		
Endrin ketone	0.05	U	U	U	7	
Technical Chlordane	0.25	U.	U	Ü	· · · · · · · · · · · · · · · · · · ·	
gamma-Chlordane	0.05	U	U	Ü		
alpha-Chiordane	0.05	4.8	U	Ü		<u> </u>
Isodrin	10	15 J	U	U		

⁽¹⁾ Based on the extraction of 1000 mL of sample to a final volume of 10 mL. Deviation will change the method detection limit. See (2) through (5). Dilution factor stays at 1 unless dilution was made after sample extraction procedure.

⁽²⁾ Based on the extraction of 50 mL of sample to a final volume of 10 mL; equivalent to 20x dilution compared to method blank

⁽³⁾ Based on the extraction of 5 mL of sample to a final volume of 10 mL; equivalent to 200x dilution compared to method blank

⁽⁴⁾ Based on the extraction of 25 mL of sample to a final volume of 10 mL; equivalent to 40x dilution compared to method blank

⁽⁵⁾ Based on the extration of 10 mL of sample to a final volume of 10 mL; equivalent to 100x dilution compared to method blank

⁽⁶⁾ Based on the extraction of 20 mL of sample to a final volume of 10 mL; equivalent to 50x dilution compared to method blank

U - non-detected compound

J - estimated value

R - rejected compound

CENTRAL STEEL & DRUM SITE 704-738 Doremus Ave. Block 5074, Lot 1 Newark, Essex County New Jersey 07105

Drum/Waste Pile Sampling Event March 31, 1998

Table 1b

Summary of March 31, 1998
Target Analyte List Analytical Results

TAL INORGANICS WORK TABLE

Project: Central Steel and Drum

START PM: Ray Klimcsak

Sampling Date: 31 March 1998

						1
Matrix / Phase		Solid	Solid	Solid	Solid	Solid
EPA ID No.	IDL	204401	204402	204403	204404	204405
Drum Number		D025	D026	D033	D066	D067
Lab ID No.	NA	887526	887554	887556	887607	887609
Percent Solids	100	100	100	100	100	100
Dilution Factor	1	1	1	1	1	1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Total Metals						
Aluminum	1.68	29.4 J	10.4 B	19.4 B	187 J	796 J
Antimony	0.25	1.1 BJ	0.51 BJ	0.84 BJ	UJ	0.27 BJ
Arsenic	0.31	UJ	UJ	UJ	0.38 BJ	1,3 J
Barium	0.01	8.1 B	4.6 B	17.0 B	13.8 B	53.0
Beryllium	0.03	Ų	U	U	0.03 B	0.06 B
Cadmium	0.03	0.73 J	0.09 B	0.33 B	Ü	0.15 B
Calcium	6.50	624	236 B	909	165 B	724
Chromium	0.09	2.6	0.49 B	1.8	0.80 B	2.8
Cobalt	0.08	U	U	U	0.31 B	0.95 B
Copper	0.07	R	R	R	, R	R
Iron	1.57	303	149	182	792	2880
Lead	0.16	18.1	26.5	19.9	18.9	71.9
Magnesium	0.67	357 B	105 B	270 B	78.7 B	292 B
Manganese	0.01	3.3	0.93 B	2.1	4.9	23.0
Mercury	0.05	U	U	U	U	U
Nickel	0.12	1.2 B	0.41 B	1.3 B	6,6	7.3
Potassium	4.11	115 B	17.3 B	28.6 B	33.7 B	77.3 B
Selenium	0.36	0.85 J	0.79 J	0.85 J	1.00 J	0.71 J
Silver	0.07	0.11 B	0.15 B	U	U	U
Sodium	30.7	356 B	224 B	297 B	628	521
Thallium	0.42	U J	U J	U J	U J	UJ
Vanadium	0.06	U	Ų	U	70.6	55.0
Zinc	0.10	631	191	692	5.8	57.2

Note: the laboratory reported that all of the samples contained 100% solids

Inorganic Qualifiers

U - non-detected compound

B - analyte detected above the IDL but below the CRDL

J - estimated value

Project: Central Steel and Drum

START PM: Ray Klimcsak

Sampling Date: 31 March 1998

Matrix / Phase		Solid	Solid	Solid	Solid	Solid
EPA ID No.	IDL	204406	204407	204408	204409	204410
Drum Number		D068	D368	D088	D005	D008
Lab ID No.	NA	887615	887617	887619	887621	887622
Percent Solids	100	100	100	100	100	100
Dilution Factor	1	1	1	1	1	1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Total Metals						
Aluminum	1.68	6.2 B	3.7 B	4.0 B	32.3 J	125 J
Antimony	0.25	UJ	UJ	UJ	J J	7.6 J
Arsenic	0.31	UJ	U J	UJ	U J	U J
Barium	0.01	0.22 B	0.13 B	0.40 B	0.72 B	8.7 B
Beryllium	0.03	U	U	Ù	Ų	U
Cadmium	0.03	U	Ü	U	U	υ
Calcium	6.50	20.6 B	15.5 B	18.6 B	25.4 B	222 B
Chromium	0.09	0.18 B	0.11 B	0.12 B	0.26 B	1400
Cobalt	0.08	U	Ü	U	0.10 B	90.6
Copper	0.07	R	R	. R	Ŗ	R
iron	1.57	8.5 B	5.6 B	29.0	128	59.8
Lead	0.16	U	0,29 B	0.74	0.49	5970
Magnesium	0.67	147 B	36.1 B	154 B	12.4 B	12.7 B
Manganese	0.01	0.20 B	0.08 B	0.21 B	0.51 B	18.3
Mercury	0.05	U	U	Ų	Ų	U
Nickel	0.12	U	U	Ű	1.0 B	0.31 B
Potassium	4.11	12.4 B	3.9 B	5.8 B	13.4 B	8.9 B
Selenium	0.36	0.75 J	0.50 J	0.45 BJ	0.60 J	0.65 J
Silver	0.07	Ú	U	U	U	0.66 B
Sodium	30.7	147 B	104 B	132 B	134 B	164 B
Thallium	0.42	UJ	U J	U J	U J	UJ
Vanadium	0.06	U	U	U	2.2 B	U
Zinc	0.10	203 J	61.9 J	265	12.3	17.1

Pb - 10X D/F

Note: the laboratory reported that all of the samples contained 100% solids

Inorganic Qualifiers

- U non-detected compound
- B analyte detected above the IDL but below the CRDL
- J estimated value
- R rejected compound

Project: Central Steel and Drum

START PM: Ray Klimcsak

Sampling Date: 31 March 1998

	1,11,00					
Matrix / Phase		Solid	Solid	Solid	Solid	Solid
EPA ID No.	IDL	204411	204412	204413	204414	204415
Drum Number		D009	D010	D011	D027	D050
Lab ID No.	NA	887623	887624	887626	887628	887634
Percent Solids	100	100	100	100	100	100
Dilution Factor	1	1	1	1	1	1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Total Metals						
Aluminum	1.68	261 J	7.3 B	176 J	30.1 J	370 J
Antimony	0.25	8.2 J	ט ז	28.4 J	0.81 BJ	5.6 BJ
Arsenic	0.31	U J	UJ	U J	UJ	12.3 J
Barium	0.01	364	0.35 B	56.6	6.1 B	6.4 B
Beryllium	0.03	U	Ú	Ų	U	0.26 B
Cadmium	0.03	U	Ü	Ų	0.70 J	0.41 B
Calcium	6.50	569	15.1 B	5180	64.4 B	4590
Chromium	0.09	392	3.1	1200	0.86 B	2.4
Cobalt	0.08	44.7	41.0	53.3	U	2.4 B
Copper	0.07	R	R	R	R	R
Iron	1.57	87.9	41.8	99.6	311	30600
Lead	0.16	3330	2030 J	12300	15.7	11.7
Magnesium	0.67	34.7 B	4.4 B	55.0 B	18.7 B	2320
Manganese	0.01	54.7	0.84 B	16.2	1.8	101
Mercury	0.05	Ú	U	Ŭ	U	0.38
Nickel	0.12	0.33 B	Û	0.42 B	1.3 B	3.4 B
Potassium	4,11	7.7 B	5.1 B	14.1 B	15.9 B	220 B
Selenium	0.36	0.74 J	0.67 J	0.46 BJ	0.80 J	3.1 J
Silver	0.07	0.19 B	0.56 B	0.53 B	U	U
Sodium	30.7	130 B	87.2 B	161 B	143 B	199 B
Thallium	0.42	UJ	UJ	U J	U J	0.57 BJ
Vanadium	0.06	U	U	U	0.13 B	2.6 B
Zinc	0.10	4.2	0.39 B	9.7	25.2	59.8

Pb - 10X D/F

Pb - 10X D/F

Fe - 5X D/F

Note: the laboratory reported that all of the samples contained 100% solids

Inorganic Qualifiers

U - non-detected compound

B - analyte detected above the IDL but below the CRDL

J - estimated value

Project: Central Steel and Drum

START PM: Ray Klimcsak

Sampling Date: 31 March 1998

- خسينم						
Matrix / Phase		Solid	Solid	Solid	Solid	Solid
EPA ID No.	IDL	204416	204417	204418	204419	204420
Drum Number		D056	D310_	D061	D260	D361
Lab ID No.	NA	887636	887638	887639	887640	887641
Percent Solids	100	100	100	100	100	100
Dilution Factor	1	1	1	1	1	1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Total Metals						
Aluminum	1.68	201 J	7.3 B	421 J	114000 J	349 J
Antimony	0.25	20.9 J	0.61 BJ	0.93 BJ		0.93 BJ
Arsenic	0.31	UJ	υJ	0.31 BJ		0,51 BJ
Barium	0.01	58,1	0.33 B	3590	99.9	2570
Beryllium	0.03	U	כ	0.04 B	Ü	0.03 B
Cadmium	0.03	U	U	U	0.61 J	Ú
Calcium	6.50	1340	25.6 B	81.4 B	1200	67.2 B
Chromium	0.09	598	2.9	1.8	27.8	2.5
Cobalt	0.08	96.5	45.0	0.24 B	342	0.26 B
Copper	0.07	R	R	R	R	R
Iron	1.57	207	23.8	4880	6540	3690
Lead	0.16	7210	27.0 J	7.1	150	14.9
Magnesium	0.67	39.0 B	7.0 B	246 B	93.6 B	252 B
Manganese	0.01	44.7	0.91 B	4.6	76.1	4.0
Mercury	0.05	0.18	Ü	U	0.24	U
Nickel	0.12	0.53 B	U	2.4 B	9.6	2.4 B
Potassium	4.11	20.8 B	15.1 B	14.0 B	48.6 B	8.3 B
Selenium	0.36	1.0 J	0.93 J	2.1 J	1.0 J	2.2 J
Silver	0.07	0.74 B	0.84 B	U	0.17 B	U
Sodium	30.7	150 B	156 B	144 B	234 B	123 B
Thallium	0.42	ŲĴ	U J	UJ	U J	Ų J
Vanadium	0.06	U	U	0.76 B	8.8	0.61 B
Zinc	0.10	10.1	0.56 B	2.8	142	2.8

Ba - 5X D/F AI - 5X D/F

Note: the laboratory reported that all of the samples contained 100% solids

Inorganic Qualifiers

U - non-detected compound

B - analyte detected above the IDL but below the CRDL

J - estimated value

Project: Central Steel and Drum

START PM: Ray Klimcsak

Sampling Date: 31 March 1998

Matrix / Phase		Liquid	Liquid	Liquid	Liquid
EPA ID No.	MDL	204401	204402	204403	204405
Drum Number	· . ·	D025	D026	D033	D067
Lab ID No.	NA	887540	887555	887572	887610
Dilution Factor	1	2	2.5	25	5
Units	ug/L	ug/L	ug/L	ug/L	ug/L
Total Metals					
Aluminum	16.8	2100 J	Ų	Ü	192000 J
Antimony	2.5	612 J	ט	398 BJ	
Arsenic	3.1	32.9 J	U	U	334 J
Barium	0.1	60.3 BJ	10.5 B	172 BJ	
Beryllium	0.3	U	ָר רַ	U	8.0 BJ
Cadmium	0.3	12.0 J	1.4 BJ	20.6 BJ	31.0 J
Calcium	65.0	16500 J	16000 J	80700 BJ	
Chromium	0.9	25.4 J	U	50.4 BJ	272 J
Cobalt	0.8	U	5.2 J	26.3 BJ	
Copper	0.7	1430 J	47.0 J	282 BJ	2280 J
Iron	15.7	68200 J	24800 J	190000 J	358000 J
Lead	1.6	3520 J	43.5 J	758 J	7760 J
Magnesium	6.7	10300 J	8430 BJ	48300 B	
Manganese	0.1	347 J	222 J	1250 J	3440 J
Mercury	0.1	U	Ų	Ų	5.3 J
Nickel	1.2	40.8 BJ	16.0 B.		
Potassium	41.1	156000 J	2440 B	71000 B.	J 42700 J
Selenium	3.6	148 J	Ũ	203 J	57.5 J
Silver	0.70	U	U	U	8.7 BJ
Sodium	307	232000 J	21000 J	523000 J	633000 J
Thailium	4.2	38.8 J	Ü	U	U
Vanadium	0.6	U	Ü	U	710 J
Zinc	1.0	29800 J	9180 J	98700 J	8310 J

Hg - 4X D/F Hg - 4X D/F Hg - 50X D/F Hg - 10X D/F Zn - 20X D/F

Note: the laboratory reported that all of the samples contained 100% solids

Inorganic Qualifiers

U - non-detected compound

B - analyte detected above the IDL but below the CRDL

J - estimated value

Project: Central Steel and Drum

Sampling Date: 31 March 1998

Matrix / Phase		Liquid	Liquid	Liquid	Liquid
EPA ID No.	IDL	204406	204407	204408	204414
Drum Number		D068	D368	D088	D027
Lab ID No.	NA	887616	887618	887620	887630
Dilution Factor	1	10	10	5	2
Units	ug/L	ug/L	ug/L	ug/L	ug/L_
Total Metals					
Aluminum	16.8	U	U	U	140 BJ
Antimony	2.5	28.1 BJ	Ų	46.9 BJ	9.2 BJ
Arsenic	3.1	U	U	U	Ü
Barium	0.1	24.0 BJ	18.6 BJ	74.5 BJ	148 BJ
Beryllium	0.3	U	U	UJ	U
Cadmium	0.3	3.7 BJ	U	2.9 BJ	564 J
Calcium	65.0	4140 B	4240 B	5140 BJ	
Chromium	0.9	23,6 BJ	18.3 BJ	15.2 BJ	
Cobalt	0,8	U	U	5.0 BJ	
Copper	0.7	51.9 BJ	19.6 BJ	38.5 BJ	4390 J
Iron	15.7	2120 J_	801 BJ	11200 J	91300 J
Lead	1.6	U	U	18.4 J	109 J
Magnesium	6.7	594000 J	581000 J	156000 J	23300 J
Manganese	0.1	124 BJ	134 B.		2970 J
Mercury	0.1	Ų	U	U	U
Nickel	1.2	25.2 BJ	1		
Potassium	41.1	1310 B	949 B	760 B	36600 J
Selenium	3.6	Ų J	95.9 J	20.2 B	
Silver	0.70	Ü	U	U	1.6 BJ
Sodium	307	26200 B	22700 B	18300 B	75000 J
Thallium	4.2	U	Ü	U	10.6 BJ
Vanadium	0.6	U	U	U	2.1 BJ
Zinc	1.0	10500 J	7730 J	15900 J	38900 J

Hg - 20X D/F Hg - 20X D/F Hg - 10X D/F Hg - 4X D/F Zn - 20X D/F

Inorganic Qualifiers

U - non-detected compound

B - analyte detected above the IDL but below the CRDL

J - estimated value

CENTRAL STEEL & DRUM SITE 704-738 Doremus Ave. Block 5074, Lot 1 Newark, Essex County New Jersey 07105

Drum/Waste Pile Sampling Event March 31, 1998

Table 1c

Summary of March 31, 1998 TCLP Analytical Results

Project: Central Steel & Drum Site

Sampling Date: March 31, 1998 SAMPLE #/CONCENTRATION (µg/L)

Sampling Date. Ma				OV WALL ET THE	CONCENTRA	TOTA (POPE)
TCLP		Liquid Phase	Waste	Waste	Waste	Waste
Compounds	Regulatory	204403	204403	204404	204415	204416
	Level	887590	887573	887608	887635	887637
			TCLP Volatiles	1 00/000	1 00:055	55/05/
Dilution Factor		83	5	5	5000	67
Benzene	500	Ü	U	U	U	Ü
Carbon Tetrachloride	500	U	U	U	Ü	U
Chlorobenzene	100000	Ü	U	U	U	Ü
Chloroform	6000	U	U	U	U	U
1,2-Dichloroethane	500	U	U	U	U	U
1,1-Dichioroethylene	700	U	U	U	U	U
Methyl Ethyl Ketone	200000	13000 J	250 J	270 J	520000	12000 J
Tetrachioroethylene	700	U	U	Ų	U	U
Trichloroethylene	500	U	U	U	U	U
Vinyl Chloride	200	U	U	U	U	U
			TOTAL Semi-Volat	illes		
Extraction Ratio		4 mL->0.5 mL	0.1L->0.5 mL	0.1L->0. 5 mL	0.1L->0. 5 mL	0.1L->0, 5 mL
2-Methylphenol	200000	190 J	51 J	U	U	8 J
3+4-Methylphenol	200000	520 J	84 J	U	U	43 J
Pentachiorophenol	100000	U	U	U	U	U
2,4,5-Trichlorophenol	400000	Ū·	U	U	U	Ü
2,4,6-Trichlorophenol	2000	U	U	U	U	U
1,4-Dichiorobenzene	7500	Ü	U	U	U	U
2,4-Dinitrotoluene	130	Ü	U	U	U	U
Hexachlorobenzene	130	U	U	Ú	. U	U
Hexachloro-1,3-butadiene	500	. U	Ü	U	U	U
Hexachloroethane	3000	U	U	U	U	U
Nitrobenzene	2000	U	U	U	U	U
Pyridine	5000	U	U	U	Ü	U
			TCLP Pesticides			
Extraction Ratio		2 mL-> 5 mL	0.1L-0. 5 mL	0.1L->0. 5 mL	0.1L->0. 5 mL	0.1L->0.5 mL
Chlordane	30	U	. U	Ú	U J	U
Endrin	20	Ú	Ü	Ú	UJ	U
Heptachlor	8	U	Ü	U	U J	U
Heptachlor Epoxide	8	Ú	0.10 J	· U	UJ	U
Lindane	400	Ü	U	U	Ų j	U
Methoxychlor	10000	U	U	υ	UJ	U
Toxaphene	500	U	U	U	U J	U
			TCLP Herbicides			
Extraction Ratio		4 mL-> 2.5 mL	0.1 L-> 2.5 mL	0.1 L-> 2.5 mL	0.1 L-> 2.5 mL	0.1 L-> 2.5 mL
2,4-0	10000	U	U	2.6	U	13 J
2,4,5-TP (Silvex)	1000	U	U	Ü	U	U

^{*} value taken from 1:10000

U - non-detected compound

J - estimated value

OTHER ANALYSES WORK TABLE - TCLP METALS

Project: Central Steel and Drum

START PM: Ray Klimcsak

Sampling Date: 31 March 1998

Matrix / Phase		Solid	Solid	Solid	Solid	
EPA ID No.	IDL	204403	204404	204415	204416	REGULATORY
Drum Number		D033	D066	D050	D056	LEVEL
Lab ID No.	NA	887573	887608	887635	887637	
Dilution Factor	1	1	1	1	1	
Total Metals						
Arsenic	0.0031	Ų	Ų	0.0035 B	U	5.0
Barium	0.0001	0.437	0.107 B	0.0307 B	0.690	100
Cadmium	0.0003	0.0091	Ų	0.00055 B	0.00045 B	1.0
Chromium	0.0009	0.0033 B	0.0013 B	U	0.0265	5.0
Lead	0.0016	0.129	0.0677	0.0209	10.1	5.0
Mercury	0.0001	U	Ü	U	Ù	0,2
Selenium	0.0036	R	R	R ·	R	1.0
Silver	0.0007	U	Ü	U	Ú	5.0

All results presented in milligrams per liter (mg/L)

Shaded result denotes exceedance of regulatory limit

Inorganic Qualifiers

U - non-detected compound

B - analyte detected above the IDL but below the CRDL

J - estimated value

R - rejected compound

D/F - dilution factor

OTHER ANALYSES WORK TABLE - TCLP METALS (CONTINUED)

Project: Central Steel and Drum

START PM: Ray Klimcsak

Sampling Date: 31 March 1998

Matrix / Phase		Liquid	
EPA ID No.	IDL	204403	REGULATORY
Drum Number		D033	LEVEL
Lab ID No.	ŊΑ	887590	
Dilution Factor	1	25	
Total Metals			
Arsenic	0.0031	Ų	5.0
Barium	0.0001	0.0645 B	100
Cadmium	0.0003	0.0143 B	1.0
Chromium	0.0009	0.0255 B	5.0
Lead	0.0016	0.0516 B	5.0
Mercury	0.0001	Ų	0.2
Selenium	0.0036	0.188	1.0
Silver	0.0007	Ų	5.0

All results presented in milligrams per liter (mg/L)

Inorganic Qualifiers

U - non-detected compound

B - analyte detected above the IDL but below the CRDL

J - estimated value

R - rejected compound

D/F - dilution factor

RCRA CHARACTERISTICS (FLASH POINT) WORK TABLE

Project: Central Steel and Drum

Sampling Date: 31 March 1998

Matrix	Method Limit	Solid	Solid	Solid	Solid
Sample No.		204401	204402	204403	204404
Lab ID No.		887526	887554	887556	887607
Ignitability/	140°F (Upper Limit)	NWR	NWR	NWR	Flashed
Flash Point					@ 108°F

and the second s	·				· · · · · · · · · · · · · · · · · · ·
Matrix	Method Limit	Solid	Solid	Solid	Solid
Sample No.		204411	204412	204414	204415
Lab ID No.		887623	887624	887628	887634
Ignitability/	140°F (Upper Limit)	Flashed	Plastied	NWR	Fiashed
Flash Point	, replantation	@ 73.8°F	@ 66.6°F		@ 68.4°F

Matrix	Method Limit	Solid	Solid	REGULA-
Sample No.		204416	204417	TORY
Lab ID No.		887636	887638	LIMIT
Ignitability/ Flash Point	140°F (Upper Limit)	B0000000000000000000000000000000000000	Flashed @ 66.41F	a

Note: shading denotes hazardous characteristic under RCRA

NWR - not within range

RCRA CHARACTERISTICS (FLASH POINT) WORK TABLE (continued)

Project: Central Steel and Drum

START PM: Ray Klimcsak

Sampling Date: 31 March 1998

Matrix	Method Limit	Liquid	Liquid	Liquid	Liquid	
Sample No.		204401	204402	204403	204406	
Lab ID No.		887540	887555	887572	887616	
Ignitability/	140°F (Upper Limit)	NWR	NWR	NWR	NWR	
Flash Point			-			

Matrix	Method Limit	Liquid	Liquid	REGULA-
Sample No.		204407	204414	TORY
Lab ID No.		887618	887630	LIMIT
Ignitability/	140°F (Upper Limit)	NWR	NWR	140°F
Flash Point				

Note: shading denotes hazardous characteristic under RCRA

NWR - not within range

CENTRAL STEEL & DRUM SITE 704-738 Doremus Ave. Block 5074, Lot 1 Newark, Essex County New Jersey 07105

Drum/Waste Pile Sampling Event March 31, 1998

Attachment I

Sampling QA/QC Work Plan

SAMPLING QA/QC WORK PLAN

CENTRAL STEEL AND DRUM NEWARK, ESSEX COUNTY, NEW JERSEY

Prepared by

Superfund Technical Assessment and Response Team
Roy F. Weston, Inc.
Federal Programs Division
Edison, New Jersey 08837

Prepared for

U.S. Environmental Protection Agency Region II - Removal Action Branch Edison, New Jersey 08837

DCN #: START-02-F-01667 TDD #: 02-97-09-0008-A PCS #: 2247

EPA Contract No.: 68-W5-0019

Approved by:

START

Date: March 5, 1998

Ray Klimcsak START Project Manager

START

Joseph M. Soroka Date: March 5, 1998

START QC

Lou DiGuardia
On-Scene Coordinator

Date: March 5, 1998

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LIST OF ATTACHMENTS

ATTACHMENT A: Site Location Map

ATTACHMENT B: Drum Sampling SOP #2009

ATTACHMENT C: Waste Pile Sampling SOP #2017

ATTACHMENT D: XRF, EPA/ERT SOP #1713

1.0 BACKGROUND

The site is located at 704-738 Doremus Avenue, Newark, New Jersey, 07105. The site is situated in an industrial area in the Iron Bound section of Newark and consists of a large manufacturing building located on 8.5 acres. Before 1952, an ink manufacturer occupied this site (International Printing Ink, Division of Interchemical Corporation, now part of Inmont Corp.). From 1952 to approximately 1991, Central Steel and Drum operated a drum reconditioning business. After vacating the property, a container shipping operation leased the property. According to NJDEP, the property has been abandoned since 1994.

The site is situated on filled wetland. On the south end of the property, bordering one side of the property, is an existing wetland where drums have been observed. To the west, along Doremus Avenue, are railroad tracks. The site, other than the main building, is gravel/weed covered filled vacant land.

2.0 DATA USE OBJECTIVES

The Region II, US EPA and Weston START team conducted a Removal Action under CERCLA guidance regulations, at the Central Steel and Drum site during the months of September 1997 - December 1997. During this time approximately 260, 55-gallon drums were sampled and characterized and later overpacked for disposal. In addition, waste ash debris from drums were consolidated into a pile. The objective of this drum sampling event is to provide additional analytical data to the US EPA Enforcement Group in their efforts to identify potential responsible parties. In addition, field screening for lead in the waste ash pile will be completed by the START team with the XRF unit.

3.0 QUALITY ASSURANCE OBJECTIVES

The overall Quality Assurance (QA) objective for chemical measurement data associated with this sampling event is to provide analytical results that are legally defensible in a court of law. The QA program will incorporate Quality Control (QC) procedures for field sampling, chain of custody, laboratory analyses, and reporting to assure generation of sound analytical results.

The EPA On-Scene Coordinator (OSC) has specified a Level 2 QA Objective (QA-2). Details of this QA level are provided in Section 6.0.

Table 1 details the QA objectives for the site, and Table 2 details the field sampling summary. The objective of this project/event applies to the following parameters:

TABLE 1: Quality Assurance Objectives

QA Parameters	Matrix	Intended Use of Data	QA Objective
TCL, TAL, TCLP Corrositivity and Ignitability	Drum Liquids and/or Solids	Site assessment	QA-2
Lead	Ash Waste Pile	Site assessment	QA-1

A Field Sampling Summary is attached in Table 2 and a QA/QC Analysis and Objectives Summary is attached in Table 3. Section 4.2, Sampling Design, provides information on analyses to be performed on the individual soil samples.

4.0 APPROACH AND SAMPLING METHODOLOGIES

4.1 Sampling Equipment

All products (liquid/sludges) from the overpacked drums will be sampled using dedicated glass COLIWASA's and or a drum thieves. Soil/sediment samples will be collected with dedicated disposable trowels in order to avoid cross-contamination. XRF screening will be accomplished using the Spectrace Model 9000 XRF.

DRUM SAMPLING

All drums will be sampled using dedicated sampling equipment. A glass Composite Liquid Waste Sampler (COLIWASA) and/or drum thief will be used for sampling liquid drum contents. The thief will be inserted into the drum until a solid layer or the bottom of the drum is encountered. Upon equilibration of the sample in the tube, it will be capped by the sampler and removed for discharge into an appropriate sample container using gravity. The glass COLIWASA permits collection of a sample from the full depth of a drum and maintains it in the transfer tube until delivery to the sample container. The COLIWASA is designed to permit representative sampling of multi-phased liquid wastes. The drum sampling will be conducted as per EPA/ERT Drum Sampling: SOP# 2009 (Attachment B).

WASTE PILE SAMPLING

Disposable plastic scoops will be used to sample the ash waste pile. For samples at depth, a decontaminated auger may be required to advance the hole, then another decontaminated auger used for sample collection. For a sample core, thin-wall tube samplers or grain samples can be collected with a clean stainless steel spoon or trowel. All samples collected, except those for volatile organic analysis, should be placed into a Teflon-lined

TABLE 3:

QA/QC Analysis and Objectives Summary

Analytical Parameters	Matrix	Analytical Method Reference	QA/QC Quantitation Limits	Minimum Detection Limit
Full TCLP	Waste/Sludge	SW-846 Method NOS 1311 TCLP Extraction B240 (VOAs) B270 (BNAs) B080 (Pesticides) B150 (Herbicides) 6010/7000 (Metals)	QA-2	Analyte specific
TAL	Waste/Sludge	CLP SOW ILMO4.Q	QA-2	Analyte specific
Full TCL	Waste/Sludge	USEPA CLP SOW OLMO 3.1	QA-2	Analyte specific
RCRA Ignitability	Waste/Sludge	SW-846 Method No. 1020	QA-2	Analyte specific
RCRA Corrosivity	Waste/Sludge	SW-846 Method No. 9040	QA-2	Analyte specific
Lead	Soil	USEPA SOP 1713	QA-1	NA

or stainless steel pail and mixed thoroughly before being transferred to an appropriate sample container. The waste pile sampling will be conducted as per EPA/ERT Waste Pile Sampling: SOP # 2017 (Attachment C).

4.2 Sampling Design

The US EPA, Region II, Enforcement Group has provided OSC Lou DiGuardia with a list of 28 drums to be sampled. The drums are presently overpacked and staged within the warehouse on the property of the Central Steel and Drum site. Drums will be sampled with dedicated COLIWASA's and analyzed for the following parameters: TCL, TAL & TIC's (28 drums); TCLP (6 of the 28 drums); and Ignitability, and Corrositivity (11 of the 28 drums). All drums will be chosen by the OSC.

A maximum of 5 ash waste pile samples will be collected with dedicated scoops and analyzed for Lead. Prior to the sample collection, gravel, debris, or foliage will be removed from the sampling point. Samples will be collected from 0-6 inches in depth. All sample locations will be taken from within the ash waste pile, at points based on the determination of the OSC.

QA/QC samples will include the collection of one field duplicate and MS/MSD sample at a ratio of 1 per 20 samples. This sampling design is based on information currently available and may be modified on site in light of field screening results and other acquired information. All deviations from the sampling plan will be noted in the Sampling Trip Report.

FIELD XRF SCREENING

The Spectrace Model 9000 XRF will be used. XRF sample analyses and handling will be conducted in accordance with EPA/ERT SOP #1713 (Spectrace 9000 Field Portable X-Ray Fluorescence Operating Procedures), as well as the manufacturer's instruction manual. Both in-situ and prepared XRF cup method maybe used.

Low, medium and high concentration National Institute of Standards and Technology (NIST) certified Standard Reference Material (SRMs) - (SRMs: 2709, 2710, and 2711 respectively) - are measured periodically during the analyses. NIST standards are measured immediately following the initial energy calibration, resolution, and zero background check sequence, every 10 sample measurements and at the end of an analytical run. The standard deviation of the non-consecutive analysis of the low standard (NIST 2709) is used to calculate the Method Detection Limit (MDL) and the Method Quantitation Limit (MQL) for the Spectrace 9000 XRF analysis. The MDL is defined as being 3 times the standard deviation of the non-consecutive analyses of the low standard, whereas the MQL is defined as being 10 times the standard deviation of the non-consecutive analysis of the low standard.

An area for in-situ analysis will be prepared by removing large rocks and debris. The soil surface will be rendered flat and compact prior to analysis. The Spectrace 9000 probe will be held firmly on the ground to maximize instrument contact with the ground. The probe will not be moved during analysis. Analysis of water saturated soils will be avoided. A thin layer of 0.2-mil polypropylene XRF film may be mounted on the surface probe to minimize contamination.

Course-grained soil conditions or nuggets of contaminated material may preclude a truly representative sample and adversely affect the analysis results (typically by under reporting the target element). Such samples will be prepared before analysis. Preparation consistency is important to minimize variation in analytical results.

Based on the anticipated action levels, the XRF run times are 30 seconds for the Cd-119 source and 15 seconds each for the Fe-55 and AM-241 sources. Lead will be the focus of the XRF screening analysis. These run times should provide detection limits of approximately 100 ppm for each analyte. Based on the performance of the XRF spectrometer, these run times may be extended. XRF QA/QC will consist of one replicate measurement, one duplicate sample, and one NIST standard run for every ten samples or fraction thereof.

No confirmation sample will be obtained to confirm the XRF results. Therefore, the XRF results will be at a data quality level of QA-1.

4.3 Standard Operating Procedures (SOPs)

4.3.1 Sample Documentation

All sample documents will be completed legibly, in ink. Any corrections or revisions will be made by lining through the incorrect entry and by initialing the error.

FIELD LOGBOOK

The field logbook is essentially a descriptive notebook detailing site activities and observations so that an accurate account of field procedures can be reconstructed in the writer's absence. All entries will be dated and signed by the individuals making the entries, and should include (at a minimum) the following:

- 1. Site name and project number.
- 2. Name(s) of personnel on site.

- 3. Dates and times of all entries (military time preferred).
- 4. Descriptions of all site activities, site entry and exit times.
- 5. Noteworthy events and discussions.
- 6. Weather conditions.
- 7. Site observations.
- 8. Sample and sample location identification and description.
- 9. Subcontractor information and names of on-site personnel.
- 10. Date and time of sample collections, along with chain of custody information.
- 11. Record of photographs.
- 12. Site sketches.
- * The description of the sample location will be noted in such a manner as to allow the reader to reproduce the location in the field at a later date.

4.3.2 Sampling SOPs

Drum Sampling

Drum sampling will be conducted as per EPA/ERT Drum Sampling: SOP# 2009 (Attachment B).

Waste Pile Sampling

The waste pile sampling will be conducted as per EPA/ERT Waste Pile Sampling: SOP # 2017 (Attachment C).

XRF Sampling

The XRF sampling will be conducted as per EPA/ERT: SOP # 1713 (Attachment D).

4.3.3 Sample Handling and Shipment

Each of the sample jars will be sealed and labeled according to proper protocols. Jar labels will contain all required information including sample number, time and date of collection, analysis requested, sample description and preservative, if used. Sealed jars will be placed in large metal or plastic coolers, and padded with an absorbent material such as vermiculite. If the samples are to be shipped, all packaging will conform to IATA Transportation regulations for overnight carriers. All sample documents will be sealed in a plastic bag and affixed to the inside of each container. The lid will be sealed and affixed on at least two sides with seals so that any type of tampering is easily visible.

4.4 Analytical Methods/Test Procedures

Analytical methods to be utilized in the analyses of samples collected during this sampling event are detailed in Table 3 (Section 3.0).

Table 4
Proposed Schedule of Work

Start Date	Activity	End Date
9 March 1998	Drum Sampling and XRF Field	9 March 1998
	Screening	

4.5 Disposal of PPE and Contaminated Sampling Materials

All PPE and sampling materials will be double bagged and sealed on site in a dedicated 85-gallon drum, which will later go out for disposal off-site.

5.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

The OSC, Lou DiGurardia, will provide overall direction to the staff concerning project sampling needs, objectives and schedule. The START PM, Ray Klimcsak, will be the primary point of contact with the OSC. The START PM is responsible for the development and completion of the Sampling QA/QC Plan, project team organization, and supervision of all project tasks, including reporting and deliverables. The START PM will act as the Site QC Coordinator and will be responsible for ensuring field adherence to the Sampling QA/QC Plan and recording of any deviations. The START PM will also be the primary project team contact. In addition START member, Joe Soroka will be in charge of the XRF Field Screening.

The following personnel will conduct work on the assessment phase of this project:

Personnel	Affiliation	Responsibility
Ray Klimcsak	Region II START	Project Manager
Mike Mahnkopf	Region II START	Sampler
Joe Soroka	Region II START	XRF Screening
Swamy Ketha	Region II START	SMO

6.0 QUALITY ASSURANCE (QA) REQUIREMENTS

The following requirements apply to the respective QA Objectives and parameters identified in Section 3.0.

The QA Protocols for an Level 2 QA objective sampling event are applicable to all sample matrices and include:

- 1. Sample documentation in the form of field logbooks, appropriate field data sheets, and chain of custody records (chain of custody records are optional for field screening locations);
- Calibration of all monitoring and/or field-portable analytical equipment prior to collection and analyses of samples with results and/or performance check procedures/methods summarized and documented in a field, personal, and/or instrument log notebook;
- 3. Field or laboratory determined method detection limits (MDLs) will be recorded along with corresponding analytical sample results, where appropriate;
- 4. Analytical holding times as determined from the time of sample collection through analysis. These will be documented in the field logbook or by the laboratory in the final data deliverable package;
- 5. Initial and continuous instrument calibration data;
- 6. QC blank results (rinsate, trip, method, preparation, instrument, etc.), as applicable;
- 7. Collection and analysis of blind field duplicate and MS/MSD QC samples to provide a quantitative measure of the analytical precision and accuracy, as applicable; and
- 8. Use of the following QC procedure for QC analyses and data validation:
 - Definitive identification confirm the identification of analytes on 10% of the screened (field or laboratory) or 100% of the unscreened samples, via an EPA-approved method; provide documentation such as gas chromatograms, mass spectra, etc.

The QA Protocols for an Level 1 QA objective sampling event are applicable to all sample matrices and include:

- 1. Sample documentation in the form of field logbooks, appropriate field data sheets, and chain of custody records (chain of custody records are optional for field screening locations);
- Calibration of all monitoring and/or field-portable analytical equipment prior to collection and analyses of samples with results and/or performance check procedures/methods summarized and documented in a field, personal, and/or instrument log notebook;
- 3. Field or laboratory determined method detection limits (MDLs) will be recorded along with corresponding analytical sample results, where appropriate.

7.0 DELIVERABLES

The Region II START Project Manager will maintain contact with the OSC to keep him informed of the technical and financial progress of this project. This communication will commence with the issuance of the work assignment and project scoping meeting. Activities under this project will be reported in status and trip reports and other deliverables (e.g., analytical reports, final reports) described herein.

The following deliverables will be provided under this project:

TRIP REPORT

A trip report will be prepared to provide a detailed accounting of what occurred during each sampling mobilization. The trip report will be prepared within one week of the last day of each sampling mobilization. Information will be provided on time of major events, dates, and personnel on site (including affiliations).

MAPS/FIGURES

Maps depicting site layout, contaminant source areas, and sample locations will be included in the trip report, as appropriate.

ANALYTICAL REPORT

An analytical report will be prepared for samples analyzed under this plan. Information regarding the analytical methods or procedures employed, sample results, QA/QC results, chain of custody documentation, laboratory correspondence, and raw data will be provided within this deliverable.

DATA REVIEW

A review of the data generated under this plan will be undertaken. The assessment of data acceptability or useability will be provided separately, or as part of the analytical report.

8.0 DATA VALIDATION

Data generated under this QA/QC Sampling Plan will be evaluated according to criteria contained in the Removal Program Data Validation Procedures that accompany OSWER Directive number 9360.4-1 and in accordance with Region II guidelines.

Laboratory analytical results will be assessed by the data reviewer for compliance with required precision, accuracy, completeness, representativeness, and sensitivity.

9.0 SYSTEM AUDIT

All provisions will be taken in the field and laboratory to ensure that any problems that may develop will be dealt with as quickly as possible to ensure the continuity of the sampling program. Any deviations from this sampling plan will be noted in the final report.

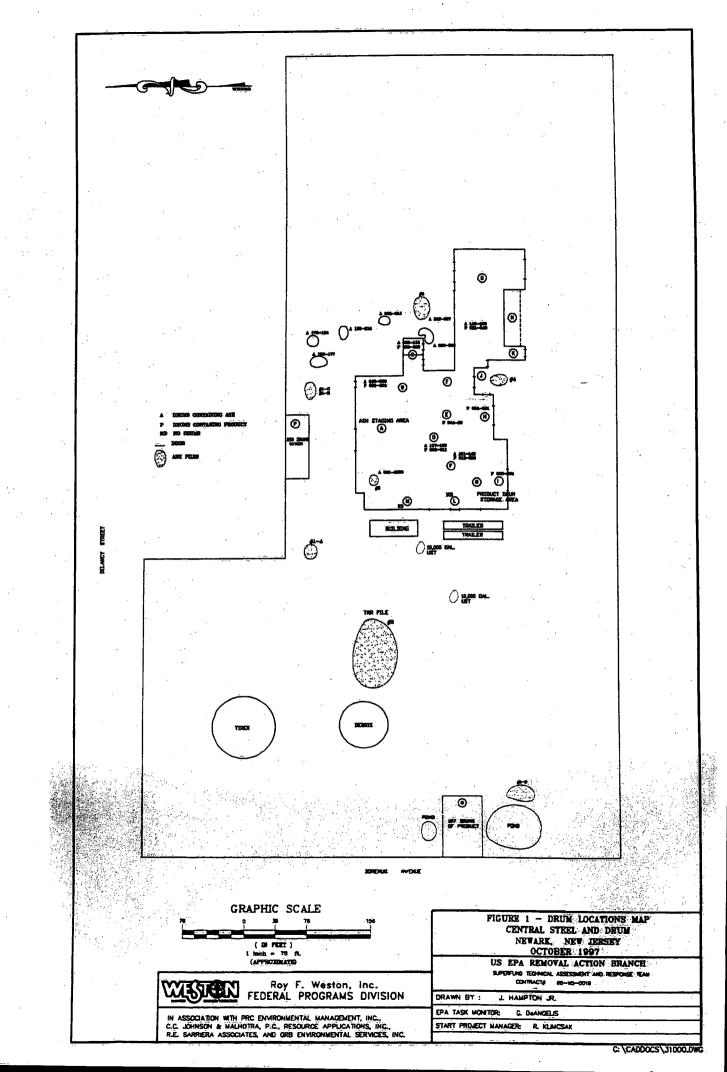
10.0 CORRECTIVE ACTION

All provisions will be taken in the field to ensure that any problems that may develop will be dealt with as quickly as possible to ensure the continuity of the project/sampling events. Any deviations from this sampling plan will be noted in the final report.

ATTACHMENT A

Figure 1

Site Location Map



ATTACHMENT B

DRUM SAMPLING SOP #2009

2.1 SCOPE AND APPLICATION

The purpose of this Standard Operating Procedure (SOP) is to provide technical guidance on safe and cost-effective response actions at hazardous waste sites containing drums with unknown contents. Container contents are sampled and characterized for disposal, bulking, recycling, grouping, and/or classification purposes.

2.2 METHOD SUMMARY

Prior to sampling, drums must be inventoried, staged, and opened. An inventory entails recording visual qualities of each drum and any characteristics pertinent to the contents' classification. Staging involves the organization, and sometimes consolidation of drums which have similar wastes or characteristics. Opening of closed drums can be performed manually or remotely. Remote drum opening is recommended for worker safety. The most widely used method of sampling a drum involves the use of a glass thief. This method is quick, simple, relatively inexpensive, and requires no decontamination.

2.3 SAMPLE PRESERVATION, CONTAINERS, HANDLING, AND STORAGE

Samples collected from drums are considered waste samples. No preservatives should be added since there is a potential reaction of the sample with the preservative. Samples should, however, be cooled to 4°C and protected from sunlight in order to minimize any potential reaction due to the light sensitivity of the sample.

Sample bottles for collection of waste liquids, sludges, or solids are typically wide-mouth amber jars with Teston-lined screw caps. Actual volume required for analysis should be determined in conjunction with the laboratory performing the analysis.

Follow these waste sample handling procedures:

1. Place sample container in two Zipioc piastic bags.

- 2. Place each bagged container in a 1-gailon covered can containing absorbent packing material. Place the lid on the can
- Mark the sample identification number on the outside of the can.
- 4. Place the marked cans in a cooler, and full remaining space with absorber: packing material.
- 5. Fill out chain of custody form for each cooler, place in plastic, and affix to inside hid of cooler.
- 6. Secure and custody seal the lid of cooler.
- Arrange for the appropriate transportation mode consistent with the type of hazardous waste involved.

2.4 INTERFERENCES AND POTENTIAL PROBLEMS

The practice of tapping drums to determine their contents is neither safe nor effective and should not be used if the drums are visually overpressurized or if shock-sensitive materials are suspected. A laser thermometer may be used instead.

Drums that have been overpressurized, to the extent that the head is swollen several inches above the level of the chime, should not be moved. A number of devices have been developed for venting critically swollen drums. One method that has proven to be effective is a tube and spear device. A light aluminum tube (3 meters long) is positioned at the vapor space of the drum. A rigid, hooking device attached to the tube goes over the chime and holds the tube securely in place. The spear is inserted in the tube and positioned against the drum wail. A sharp blow on the end of the spear drives the sharpened tip through the drum and the gas vents along the grooves. The venting should be done from behind a wall or barricade. This device can be cheaply and easily designed and constructed where needed. Once the pressure has been relieved, the bung can be removed and the drum sampled.

2.7 PROCEDURES

2.7.1 Preparation

- Determine the extent of the sampling effort the sampling methods to be employed, and which equipment and supplies are needed.
- 2. Obtain necessary sampling and monitoring equipment.
- Decontaminate or precisal equipment, and ensure that it is in working order.
- Prepare scheduling and coordinate with staff, clients, and regulatory agency, if appropriate.
- Perform a general site survey prior to site entry in accordance with the site-specific health and safety plan.
- Use stakes, flagging, or buoys to identify and mark all sampling locations. If required, the proposed locations may be adjusted based on site access, property boundaries, and surface obstructions.

2.7.2 Drum Inspection

Appropriate procedures for handling drums depend on the contents. Thus, prior to any handling, drums should be visually inspected to gain as much information as possible about their contents. Those in charge of inspections should be on the look-out for:

- drum condition, corresion, rust, and leaking contents
- symbols, words, or other markings on the drum indicating hazards (i.e., explosive, radioactive, toxic, flammable)
- signs that the drum is under pressure
- shock sensitivity

Monitor around the crums with radiation instruments, organic vapor monitors (OVA) and combustible gas indicators (CGI).

Classify the drams into exercises, for instance:

- radioactive
- · leaking/deteriorating
- bulging
- · drums containing lab packs
- emicsive/shock sensitive

All personnel should assume that unmarked drums contain harardous materials until their contents have been categorized, and that labels on drums may not accurately describe their contents.

If it is presumed that there are buried drams onsite, geophysical investigation techniques such as magnetometry, ground penetrating radar, and metal detection can be employed in an attempt to determine depth and location of the drams. See ERT SOP #2159. General Surface Geophysics.

2.7.3 Drum Staging

Prior to sampling, the drums should be staged to allow easy access. Ideally, the staging area should be located just far enough from the drum opening area to prevent a chain reaction if one drum should explode or catch fire when opened.

While staging, physically separate the drums into the following categories: those containing liquids, those containing solids, lab packs, or gas cylinders, and those which are empty. This is done because the strategy for sampling and handling drums/containers in each of these categories will be different. This may be achieved by:

- Visual inspection of the drum and its labels, codes, etc. Solids and sludges are typically disposed of in open-top drums. Closed-head drums with a bung opening generally contain liquid.
- Visual inspection of the contents of the drum during sampling followed by restaging, if needed.

Once a drum has been excavated and any immediate hazard has been eliminated by overpacking or transferring the drum's contents, affix a numbered tag to the drum and transfer it to a staging area. Color-coded tags, labels, or bands should be used to mark similar waste types. Record a description of each drum, its condition any unusual markings, and the location where it was buried or stored on a drum data sheet (Appendix A). This data sheet becomes the principal

Since drams cannot be opened slowly with these tools, spray from drams is common requiring appropriate safety measures. Decontaminate the pick of spike after each dram is opened to avoid most-contamination and/or adverse chemical reaction from incomparitie materials.

Remote Drum Opening with a Eackhoe Spike

Remotely operated dram opening tools are the safest available means of dram opening. Remote dram opening is slow, but is much safer compared to manual methods of opening.

Drums should be "staged" or placed in rows with adequate aisie space to allow ease in backhoe maneuvering. Once staged, the drums can be quickly opened by punching a hole in the drum head or lid with the spike.

The spike (Figure 4, Appendix B) should be decontaminated after each drum is opened to prevent cross-contamination. Even though some splash or spray may occur when this method is used, the operator of the backhoe can be protected by mounting a large shatter-resistant shield in front of the operator's cage. This, combined with the required level of personal protection gear, should be sufficient to protect the operator. Additional respiratory protection can be afforded by providing the operator with an on-board airline system.

Remote Drum Opening with Hydraulic Devices

A piercing device with a metal point is attached to the end of a hydraulic line and is pushed into the drum by hydraulic pressure (Figure 5, Appendix B). The piercing device can be attached so that the sampling hole can be made on either the side or the head of the drum. Some of the metal piercers are hollow or tube-like so that they can be left in place if desired and serve as a permanent tap or sampling port. The piercer is designed to establish a tight seal after penetrating the container.

Remote Drum Opening with Pneumatic Devices

Pneumatically-operated devices utilizing compressed air have been designed to remove drum bungs remotely (Figure 6, Appendix B).

2.7.5 Drum Sampling

After the drum has been opened, monitor headspace gases using an explosimeter and organic vapor analyzer. In most cases it is impossible to observe the contents of these sealed or partially sealed vessels. Since some layering or stratification is likely in any solution left undisturbed over time, take a sample that represents the entire depth of the vessel.

When sampling a previously sealed vessel check for the presence of a bottom single. This is easily accomplished by measuring the depth to the apparent bottom, then comparing it to the known interior depth.

Glass Thief Sampler

The most widely used implement for sampling is a glass tube commonly referred to as a glass thief (Figure 7, Appendix B). This tool is simple, cost effective, quick, and collects a sample without having to decontaminate. Glass thieves are typically 6mm to 16mm I.D. and 48 inches long.

Procedures for using a glass thief are as follows:

- 1. Remove cover from sample container.
- Insert glass tubing almost to the bottom of the drum or until a solid layer is encountered. About one foot of tubing should extend above the drum.
- 3. Allow the waste in the drum to reach its natural level in the tube.
- 4. Cap the top of the sampling tube with a tapered stopper or thumb, ensuring liquid does not come into contact with stopper.
- 5. Carefully remove the capped tube from the drum and insert the uncapped end in the sample container.
- 6. Release stopper and allow the giass thief to drain until the container is approximately 2/3 full.
- 7. Remove tube from the sample container, break it into pieces and place the pieces in the drum.

- Package samples and complete necessary paperwork.
- 10. Transport sample to decompaniention zone to prepare it for transport to the assisting incomery.

2.8 CALCULATIONS

This section is not applicable to this SOP.

2.9 QUALITY ASSURANCE/ QUALITY CONTROL

The following general quality assurance procedures apply:

- Document all data on standard chain of custody forms, field data sheets, or within site logbooks.
- Operate all instrumentation in accordance with operating instructions as supplied by the manufacturer, unless otherwise specified in the work plan. Equipment checkout and calibration activities must occur prior to sampling/operation, and they must be documented.

2.10 DATA VALIDATION

This section is not applicable to this SOP.

2.11 HEALTH AND SAFETY

When working with potentially hazardous materials, follow U.S. EPA OSHA and specific health and safety procedures.

The opening of closed containers is one of the most hazardous site activities. Maximum efforts should be made to ensure the safety of the sampling team. Proper protective equipment and a general awareness of the possible dangers will minimize the risk inherent in sampling operations. Employing proper drum-opening techniques and equipment will also safeguard personnel. Use remote sampling equipment whenever feasible.

ATTACHMENT C WASTE PILE SAMPLING SOP #2017

5.1 SCOPE AND APPLICATION

The objective of this Standard Operating Procedure (SOP) is to outline the equipment and methods used in collecting representative samples from waste piles, sludges or other solid or liquid waste mixed with soil.

5.2 METHOD SUMMARY

Stainless steel shovels or scoops should be used to clear away surface material before samples are collected. For samples at depth, a decontaminated auger may be required to advance the hole, then another decontaminated auger used for sample collection. For a sample core, thin-wall tube samplers or grain samplers may be used. Near surfaces samples can be collected with a clean stainless steel spoon or trowel.

All samples collected, except those for volatile organic analysis, should be placed into a Teflon-lined or stainless steel pail and mixed thoroughly before being transferred to an appropriate sample container.

5.3 SAMPLE PRESERVATION, CONTAINERS, HANDLING, AND STORAGE

Chemical preservation of solids is generally not recommended. Refrigeration to 4°C is usually the best approach, supplemented by a minimal holding time.

Wide mouth glass containers with Teflon-lined caps are typically used for waste pile samples. Sample volume required is a function of the analytical requirements and should be specified in the work plan.

5.4 INTERFERENCES AND POTENTIAL PROBLEMS

There are several variables involved in waste sampling, including shape and size of piles,

compactness, and structure of the waste material. Shape and size of waste material or waste piles vary greatly in areal extent and height. Since state and federal regulations often require a specified number of samples per volume of waste, size and shape must be used to calculate volume and to plan for the correct number of samples. Shape must also be accounted for when planning physical access to the sampling point and when selecting the appropriate equipment to successfully collect the sample at that location.

Material to be sampled may be homogeneous or heterogeneous. Homogeneous material resulting from known situations may not require an extensive sampling protocol. Heterogeneous and unknown wastes require more extensive sampling and analysis to ensure the different components are being represented.

The term "representative sample" is commonly used to denote a sample that has the properties and composition of the population from which it was collected, in the same proportions as found in the population. This can be misleading unless one is dealing with a homogenous waste from which one sample can represent the whole population.

The usual options for obtaining the most "representative sample" from waste piles are simple or stratified random sampling. Simple random sampling is the method of choice unless (1) there are known distinct strata; (2) one wants to prove or disprove that there are distinct strata; or (3) one is limited in the number of samples and desires to minimize the size of a "hot spot" that could go unsampled. If any of these conditions exist, stratified random sampling would be the better strategy.

This strategy, however, can be employed only if all points within the pile can be accessed. In such cases, the pile should be divided into a three-dimensional grid system; the grid sections assigned numbers; and the sampling points chosen using random-number tables or random-number generators. The only exceptions to this are situations in which representative samples cannot be collected safely or where the investigative team is trying to determine worst-case conditions.

precision demonstrated by sample team members. Use of a flat, pointed mason trowel to cut a block of the desired material can be helpful when undisturbed profiles are required. A stainless steel scoop, lab spoon, or plastic spoon will suffice in most other applications. Care should be exercised to avoid the use of devices plated with chrome or other materials. Plating is particularly common with implements such as garden trowels.

Use the following procedure to collect surface samples:

- Carefully remove the top layer of material to the desired sample depth with a precleaned spade.
- Using a precleaned stainless steel scoop, plastic spoon, or trowel, remove and discard a thin layer of material from the area which came in contact with the spade.
- 3. If volatile organic analysis is to be performed. transfer the sample into an appropriate, labeled sample container with a stainless steel lab spoon, plastic lab spoon, or equivalent and secure the cap tightly. Place the remainder of the sample into a stainless steel, plastic, or other appropriate homogenization container, and mix thoroughly to obtain a homogenous sample representative of the entire sampling interval. Then, either place the sample into appropriate, labeled containers and secure the caps tightly; or, if composite samples are to be collected, place a sample from another sampling interval into the homogenization container and mix thoroughly. compositing is complete, place the sample into appropriate, labeled containers and secure the caps tightly.

SAMPLING WITH AUGERS AND THIN-WALL TUBE SAMPLERS

This system consists of an auger, a series of extensions, a T handle, and a thin-wall tube sampler (Figure 13, Appendix B). The auger is used to bore a hole to a desired sampling depth, and is then withdrawn. The sample may be collected directly from the auger. If a core sample is to be collected, the auger tip is then replaced with a thin-wall tube sampler. The system is then lowered down the borehole, and driven into the pile at the completion depth. The system is withdrawn

and the core collected from the thin-wall tube sampler.

Several augers are available. These include: bucket, continuous flight (screw), and post hole augers. Bucket augers are better for direct sample recovery since they provide a large volume of sample in a short time. When continuous flight augers are used, the sample can be collected directly from the flights, which are usually at 5-foot intervals. The continuous flight augers are satisfactory for use when a composite of the complete waste pile column is desired. Post hole augers have limited utility for sample collection as they are designed to cut through fibrous, rooted, swampy areas.

Use the following procedure for collecting waste pile samples with the auger:

- 1. Attach the auger bit to a drill rod extension, and attach the "T" handle to the drill rod.
- Clear the area to be sampled of any surface debris. It may be advisable to remove the first 3 to 6 inches of surface material for an area approximately 6 inches in radius around the drilling location.
- 3. Begin augering, periodically removing and depositing accumulated materials onto a plastic sheet spread near the hole. This prevents accidental brushing of loose material back down the borehole when removing the auger or adding drill rods. It also facilitates refilling the hole, and avoids possible contamination of the surrounding area.
- 4. After reaching the desired depth, slowly and carefully remove the auger from boring. When sampling directly from the auger, collect sample after the auger is removed from boring and proceed to Step 10.
- 5. Remove auger tip from drill rods and replace with a precleaned thin-wall tube sampler. Install proper cutting tip.
- 6. Carefully lower the tube sampler down the borehole. Gradually force the tube sampler into the pile. Care should be taken to avoid scraping the borehole sides. Avoid hammering the drill rods to facilitate coring as the vibrations may cause the boring walls to collapse.

- 2. Rotate the sampler inner tube into the open position.
- Wiggle the sampler a few times to allow material to enter the open slots.
- 4. With the sampler in the closed position, withdraw it from the material being sampled.
- 5. Place the sampler in a horizontal position with the slots facing upward.
- 6. Rotate the outer tube and slide it away from the inner tube.
- 7. If volatile organic analysis is to be performed, transfer the sample into an appropriate, labeled sample container with a stainless steel lab spoon, plastic lab spoon, or equivalent and secure the cap tightly. Place the remainder of the sample into a stainless steel, plastic, or other appropriate homogenization container, and mix thoroughly to obtain a homogenous sample representative of the entire sampling interval. Then, either place the sample into appropriate, labeled containers and secure the caps tightly, or, if composite samples are to be collected, place a sample from another sampling interval into the homogenization container and mix thoroughly. compositing is complete, place the sample into appropriate, labeled containers and secure the caps tightly.

5.8 CALCULATIONS

This section is not applicable to this SOP.

5.9 QUALITY ASSURANCE/ QUALITY CONTROL

There are no specific quality assurance activities which apply to the implementation of these procedures. However, the following QA procedures apply:

- All data must be documented on field data sheets or within site logbooks.
- All instrumentation must be operated in accordance with operating instructions as supplied by the manufacturer, unless otherwise specified in the work plan. Equipment checkout and calibration activities must occur prior to sampling/operation, and they must be documented.

5.10 DATA VALIDATION

This section is not applicable to this SOP.

5.11 HEALTH AND SAFETY

When working with potentially hazardous materials, follow U.S. EPA, OSHA and specific health and safety procedures.

ATTACHMENT D

XRF, EPA/ERT SOP #1713

CENTRAL STEEL & DRUM SITE 704-738 Doremus Ave. Block 5074, Lot 1 Newark, Essex County New Jersey 07105

Drum/Waste Pile Sampling Event March 31, 1998

Attachment II

Trip Report

SAMPLING TRIP REPORT

SITE NAME:

Central Steel and Drum Site

DCN #: START-02-F-01764

TDD #: 02-97-09-0008A

EPA I.D. NO.:

RA .

SAMPLING DATES:

March 31, 1998

Site Location: 1.

Refer to Figure 1

Sample Locations: 2.

Refer to Figure 2

3. Sample Descriptions: Refer to Table 1& 2

4. Laboratories Receiving Samples:

Sample Type

Name and Address of Laboratory

TCL

TAL

TCLP VOA

TCLP Non-Volitile

TCLP Metals

Flash Point

Compuchem Labatories, Inc.

501 Madison Ave.

Cary, NC 27513

5. Sample Dispatch Data:

Twelve drum samples for TCL, TAL, full TCLP and flash point analyses, were shipped to the Compuchem Labatories on March 31, 1998 via Federal Express (Airbill No. 4811729333).

6. On-Site Personnel:

Name

Company

Duties on Site

Louis DiGuardia

U.S. EPA Region II Task Monitor

Ray Klimcsak

Region II START

Project Manager

Mike Mahnkopf

Region II START

Site QA/QC Officer

and

Safety

Site Health Coordinator

Bruce Lin

Region II START

Sampler

Dave Adams

Region II START

Sampler

7. Additional Comments:

On March 31, 1998, the Region II Superfund Technical Assessment and Response Team (START), collected drum samples from the Site. All samples collected were to be analyzed for Target Analyte List (TAL), TCL, full TCLP and flash point parameters through private laboratories. The samples were shipped to a private laboratory in Cary, NC. Chain of Custody Records are presented in Attachment 1

8. Report Prepared by:

Ray Klimcsak, START

9. Report Approved by

Bruce Lin, START

Date:

Date: 4/16/98

SITE LOCATION AND SAMPLING LOCATION MAPS

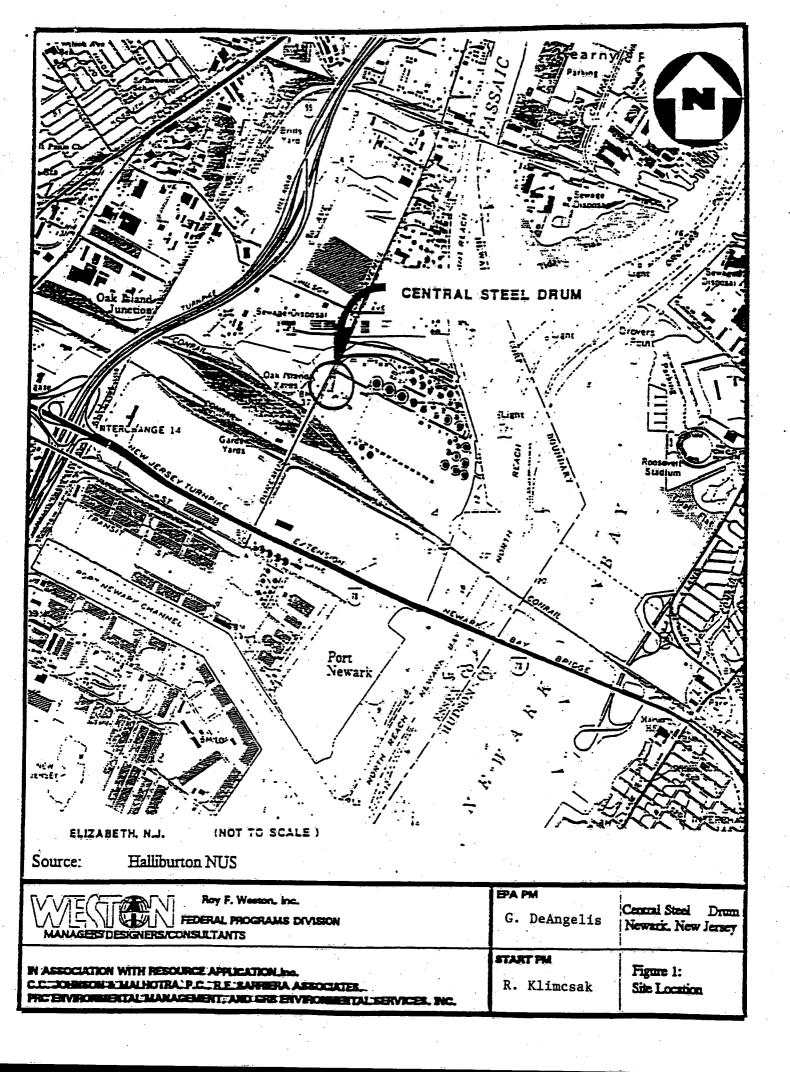


TABLE 1 SAMPLE DESCRIPTIONS CENTRAL STEEL AND DRUM SITE NEWARK, MIDDLESEX, NEW JERSEY SAMPLING DATE: 3/31/98

DRUM NUMBER	EPA ID NUMBER	TCL	TAL	FULL TCLP	RCRA FL PT.	TIME	COMMENTS
D025	204401	1	1		1	0930	
D026	204402	\	1	·	1	0935	
D033	204403	1	\	1	1	0940	MS/MSD
D066	204404	✓	\	¥	1	0945	
D067	204405	1	1			0950	
D068	204406	1	✓		✓	0955	
D368	204407	1	1		1	0955	Duplicate of D068
D088	204408	1	1			1000	
D005	204409	1	1			1005	
D008	204410	1	1			1010	
D009	204411	/	1			1015	MS/MSD
D010	204412	1	. /	·	1	1020	
D011	204413	1	1			1025	
D027	204414	1	1		1	1030	
D050	204415	1	1	/	/	1035	
D056	204416	1	1	1	1	1040	
D310	204417	1	1		1	1020	Duplicate of D010
D061	204418	1	1			1050	MS/MSD
D260	204419	1	1			1055	
D361	204420	1	1			1050	Duplicate of D061

ATTACHMENT 1 CHAIN OF CUSTODY RECORDS

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SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM EN CONTRACT 68-WY-0019

Part: 904-775-6116 Fam 904-725-705

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2. Ground Water

I. Ha

2. HN03

•	N-2504	
	132504	,

4. Lineate 5. Soil/Sodiment

5. OI 7. Waste

اع. Other (Specify)

3. Loscheto

رية (Specify)

6. Ic= Caly

N. Na Procvai See Conner

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Roy F. Wester, Inc., USEPA Region II START

Suize 201, 1090 King Georges Post Road, Edison, New Jersey 08837-3703

Amention: Smita Sumbaly, START Analytical Coordinator

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Roy F. Weston,	inc.	1/4	ノク	Amp Ce	20	44	04		MS	143	Ď.	-)	السة	1 7	RLI	クトノ	
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FEDERAL PROGRAMS DIVISION

In Association with Resource Applications, Inc., R.E. Services Associates, PRC Environmental

Management, C.C. Joinson & Malhotta, P.C., and GRB Environmental Services, Inc.

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204419	1055	1	<u> </u>	<u> </u>		Y	ン	V	1					:	\dashv
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	monability for Sample:											Time	•	Date (WW/DD/XX)	
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Sample Number	Reinquished By:	/	Time	Date	Rece	ived B	y:	- 2			· · · · ·	Rese	on for	Crande of Craody	
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Roy F. Weston, Inc.

FEDERAL PROGRAMS DIVISION

Precautionary Measures Against Hidden Hazards in Laboratory Dampie

Notice to Laboratory Personnel

Background

Under the authority of Section 104 of the Commehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) of 1980, Section 311 of the Clean Water Act, and Subtitle I of the Resource Conservation and Recovery Act (RCRA), FPA has been delegated the responsibility to undertake response actions with respect to the release or potential release of oil, petroleum, or hazardous substances that pose a substantial threat to human health or welfare, or the environment. In addition, FPA provides technical assistance to help mitigate endangerment of the public health, welfare or environment during other emergencies and natural disasters.

EPA's successful implementation of these emergency response action responsibilities requires that technical support capabilities be provided in the form of a contracted Superfund Technical Assessment and Response Team (START) for each EPA Region. The WESTON START Contract 68-W5-0019 provides support to EPA Region II.

Hazard Communication

The samples which accompany this notice have been shipped to your laboratory for analysis in accordance with applicable D.O.T. or IATA Regulations and were collected by the WESTON START and were tentatively designated by the field response team as either environmental or hazardous material samples.

In general, Environmental Samples are collected from streams, farm ponds, small lakes, wells, and off-site soils that are not reasonably expected to be contaminated with hazardous materials. Samples of on-site soils or water, and materials collected from drums, bulk storage tanks, obviously contaminated ponds, impoundments, lagoons, pools, and leachates from hazardous waste sites are considered Hazardous Samples. Samples which are obtained from a known radioactive material contamination site or which demonstrate beta or gamma activity greater than three times average background as scanned with a Geiger-Mueller radiation survey meter are considered Radioactive Samples.

The samples which accompan				
Environmental	Hazardous	Comb. (Envir.& Haz.)	Radioactive	
	OSHA conventions to	provide protection against I	Sozzipie Lamological of chemica	l
exposure: Level A	Level B	Level C	Level D	
with EPA and OSHA regule WESTON START are not re intended to serve as substitut	ntions. The sample cli epresented to be, nor o es for professional/per	issification(s) and Levels of ure they adequate or applica- rsonal judgement.	laboratory samples in accordance personal protection used by the ble in all situations, nor are the	C
This form was prepared by:_	M. MAKAKOPF		· ·	
Analytical Services TDD No.		Date/_/_		
WESTON Office: Region II	*	Phone: 908-225-6116 FAX:	: 908-225-7037	
Laboratory Name:	mps (Hom		•	
/Hazcom for Laboratory Pers	sonnel/ To be attached	to each Chain-of-Custody F	oom	

	Project Name	CONTRAL Stee	& 3 Dr.		Samples to:	;	
		1m/DA	Affiliation	TART	Bact	Bio Chem	Other
	SAMPLING METHO		LDMS CODE		Station No.		
	Niskin Net	Seine Trawl Bucket	DATA BASE	CODE			
	Trowel Creat	n Dipper	STA. TYPE C	ODE	Sample Des	th /5t //5cc los	L. L. J. J. J.
	Automatic	in THIEF		•	Sample Det	oth (Ft.)/Fac. Loc	. Code
	Other	M THIEF			_		
	SUBSTRATE TYPE (Circle) Aqueous S	Sediment Slud	ge Oil Biological	Lab Numbe	, A	· · · · · · · · · · · · · · · · · · ·
			ktract Other ()	20	4401	_
	BOD — Seed Suppl		Source:		Type of Sar		
	Sample F	Preparation (Circle)		Source Type (Circle)	Grab	Composite	
	Container	Cleaning Procedure	Landfill	Industrial	41	Time Space	
	Glass Jai	Detergent Wash	Leachate	Effluent	 	<u> </u>	J
	Plastic Jar	Water Rinse	Drum	Process Stream		Ending) Date	
	Metal	Acid Rinse	Test Well	Holding Pond	918	Mo Day	
	POA Vial	Solvent Rinse:	_ Depth: Other:	Waste Pile	1918	0331/	
	Cubitainer	Hexane	Ottion.	Municipal Treatment	Ending Tim	e (24 Hr)	
	Acetate Core Paper Cap	Methylene Chloride	Storage Tank	Influent			
1	Teflon Cap	Other (Specify):	Top	Effluent-Cl	093	50	
'	Foil Cap	Giner (Jeli et	Middle	Effluent-Non Cl	Beginning [Date	
	Other	,	Bottom	Sludge	Yr	Mo Day	
			Truck	Ambient			:
	Preservation		Drum	Lake			
	Acid		Tank	Stream	Beginning 1	Time (24 Hr)	
	Solvent		Other	_ Pond			•
	Chemical			Ocean		لبل	
(Wet Ice		Wells	Estuary	рH		
	Dry Ice		Monitoring				
	Ambient		Production Drinking				
	Other	•	Private		Sample Ten	np. (°C)	
· . ~	Comple Leasting De	norintion:	1		$+ \Box \Box \Box$		
	Sample Location De						
	Der #	D0025		•	DO (mg/l)		•
	Black	- D0025 Brom oil	- 50=1	, 3			
	:	المتحددا	100/		Cond. (uMH	IOS/CM)	
	مك	la lles	به جرین	,			
	•						
			<u> </u>		Salinity(%)		
	Remarks:				7		
	- An	C1221X	v-na	•			•
	T (M-SIS I TEL TAL			Sample Spi	it	•
			•		☐ Yes	□ No	
		1AL			If Yes With	Whom?	
	•	Ex Rea	AFI	·T.			
		THE PLUM	a prop		Receipt	☐ Yes ☐ I	No
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FIELD DATA SHEET
ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey
ENVIRONMENTAL SERVICES DIVISION

Project Name	Center Steel	J DL-A		Samples to:
	m DA	Affiliation	4eT	Bact Bio Chem Other
SAMPLING METHO Kemmerer D Niskin Net Trowel Crea Automatic Other DA SUBSTRATE TYPE BOD — Seed Suppl	D (Circle) oredge Ponar Manual Seine Trawl Bucket m Dipper Circle) Aqueous Solvent Ex	LDMS CODE DATA BASE (STA. TYPE CO Sediment Sludge stract Other (Source:	CODE	Station No. Sample Depth (Ft.)/Fac. Loc. Code Lab Number 204402 Type of Sample Grab Composite
Container Gloss los		Landfill	Effluent Effluent	Time Space
Glass Jar Plastic Jar Metal POA Vial Cubitainer	Detergent Wash Water Rinse Acid Rinse Solvent Rinse: Acetone	Drum Test Well Depth: Other:	Process Stream Holding Pond Drum Waste Pile	Collection (Ending) Date Yr Mo Day 9 8 0 3 / Ending Time (24 Hr)
Acetate Core	Hexane Methylene Chloride	Storage Tank	Municipal Treatment Influent	
Paper Cap Teflon Cap	Other (Specify):	Top	Effluent-Cl	10935
Foil Cap		Middle	Effluent-Non Cl	Beginning Date
Other		Bottom Truck	Sludge Ambient	Yr Mo Day
Preservation		Drum	Lake	
Acid	1	Tank	Stream	Beginning Time (24 Hr)
Solvent		Other	Pond	
Chemical	,		. Ocean	
Wet Ice		Wells	Estuary	pH
Dry Ice		Monitoring]	
Ambient		Production	·	
Other	•	Drinking		Sample Temp. (°C)
		Private		J Sample Temps (*C)
Sample Location De		26		DO (mg/l)
	Dern # Doo Blazk b Clear 1	rout of	-40%	
	Clean 1	resid -	60%	Cond. (uMHOS/CM)
				Satista (R/)
Remarks:				Salinity(%)
	Analysis			
	TCL ,	TAL		Sample Split
•	Analysis TCL () Read	☐ Yes ☐ No		
	KCRA	1-1.0		If Yes With Whom?
·		•		Receipt
•				

Form: FTB RPD-11-82-2

						_
	Project Name	POTRAL STU			Samples to:	
	Collector(s)	IDA	Affiliation -57	ART	Bact Bio Chem Other	
					1 555 555 555 555	
	SAMPLING METHO	D (Circle)	LDMS CODE			
		redge Ponar Manual	FOWIG CODE		Station No.	
		Seine Trawl Bucket	DATA BASE O	CODE		1
	Niskin Net	00				١
	Trowel Cream	n Dipper	STA. TYPE CO	ODE	Sample Depth (Ft.)/Fac. Loc. Code	4
	Automatic	~ THIEF		•	Sample Depth (Ft.)/Fac, Loc. Code	
	Other	771102				
	SUBSTRATE TYPE (Circle) Aqueous S	Sediment Sludg	ge Oil Biological	Lab Number	
		Solvent Ex	tract Other (· · · · · · · · · · · · · · · · · · ·		
		OUIVEIIL EX	tract Other (,)	204403	
	BOD — Seed Suppli	ed 🗆 Yes 🗆 No	Source:			
		Preparation (Circle)		Source Type (Circle)	Type of Sample	
			Landfill		Grab Composite	
	Container	Cleaning Procedure	 	Industrial	Time Space	
(Glass Jar	Detergent Wash	Leachate	Effluent		
-	Plastic Jar	Water Rinse	Drum	Process Stream	Collection (Ending) Date	
	Metal	Acid Rinse	Test Well	Holding Pond	Yr Mo Day	
	POA Vial	Solvent Rinse:	Depth:	Drum	1918 013 311	
	Cubitainer	Acetone	Other:	Waste Pile		
	Acetate Core	Hexane		Municipal Treatment	Ending Time (24 Hr)	
	Paper Cap	Methylene Chloride	Storage Tank	Influent		
/		Other (Specify):	Top	Effluent-Cl	10940	
(Teflon Cap	Other (Specify).	Middle		<u> </u>	
	Foli Cap	·		Effluent-Non Cl	Beginning Date	
	Other		Bottom	Sludge	Yr Mo Day	
			Truck	Ambient		
	Preservation		Drum	Lake		
	Acid		Tank	Stream	Beginning Time (24 Hr)	,
	Solvent		Other	Pond		
	Chemical		· · · · · · · · · · · · · · · · · · ·	Ocean		
<	Wet Ice		Wells	Estuary		
_	Dry Ice		Monitoring		pH	
	Ambient		Production			
	Other		Drinking			
	Other	!	•		Sample Temp. (°C)	
			Private		==:::::::::::::::::::::::::::::::::::	
	Sample Location Des	scription:				
	Ν.	#P0033				
	1200 m	47420-22			DO (mg/l)	
		RI. L brown	light si	1 - 50%		
		DIMI- H		, - , , -		
		Black brown	, -	Cno/	Cond. (uMHOS/CM)	
•	•	Clar Sign	d	2 2 13	CONG. (UMITIOS/CM)	
					Salinity(% _o)	
	Remarks:		· · · · · · · · · · · · · · · · · · ·			
		1-1712		. 1		
	F	TEL, TAL, Rens For	^	1 1 2 0 NT	<u> </u>	
	•		/ \ .	X N37	Sample Split	
		TCL, JAL.	N > L	$oldsymbol{\mathcal{G}}(A_{ij})$, which is the state of A_{ij}	7 V 7 7:	
					□ Yes □ No	
		Acas Ica	√		If Yes With Whom?	
		person - or	7			
		\mathcal{L} , \mathcal{L}	TELP	·	Receipt	
	•	Full	/ ` - '	·		
		Tax I all	5	~ ·		
	Form: FTB RPD-11-82-2	MATHOR	F > 6			

	ENTERS SEN	7 DRJ	<u> </u>	Samples to:
Project Name	IN INA	.57	ALT	Bact Bio Chem Other
Collector(s)	IM DA	ffiliation	7-10-7	
The state of the s				an dia No
SAMPLING METHOL) (Circle)	LDMS CODE		Station No.
Kemmerer Dr	edge Ponar Manual	DATA BASE C	ODE	
Niskin Net	Seine Trawl Bucket	DATA BASE O	ODE	
Trowel Crean		STA TYPE CO	DE	Sample Depth (Ft.)/Fac. Loc. Code
	·			Sample Deptil (1.17)
Automatic	~ THIEF			
Other		<u> </u>		1
	Actionity S	ediment Sludg	e Oil Biological	Lab Number
SUBSTRATE TYPE (Circle) Aqueous S	adimoni o.e.e.a		004404
·	Solvent Ext	ract Other (· · · · · · · · · · · · · · · · · · ·	204404
	<u> </u>			
BOD — Seed Suppli	ed 🗆 Yes 🗆 No	Source:		Type of Sample
BOD — Seed Coppy	reparation (Circle)	Sample S	Source Type (Circle)	Grab Composite
	Cleaning Procedure	Landfill	Industrial	Time Space
Container	Detergent Wash	Leachate	Effluent	
Glass Jar		Drum	Process Stream	Collection (Ending) Date
Plastic Jar	Water Rinse	Test Well	Holding Pond	
Metal	Acid Rinse	- i i i i i i i i i i i i i i i i i i i	Drum	9 18 0 3 3 1/
POA Vial	Solvent Rinse:	Depth:	_ Waste Pile	
Cubitainer	Acetone	Other:		Ending Time (24 Hr)
Acetate Core	Hexane		Municipal Treatment	1 7 7 7 7 7
Paper Cap	Methylene Chloride	Storage Tank	Influent	1101914151
Teflon Cap	Other (Specify):	Тор	Effluent-Cl	Beginning Date
Foil Cap		Middle	Effluent-Non Cl	
Other		Bottom	Sludge	Yr Mo Day
Other		Truck	Ambient	
	1	Drum	Lake	
Preservation	-	Tank	Stream	Beginning Time (24 Hr)
Acid		Other	_ Pond	
Solvent	•		_ Ocean	
Chemical	<u>-</u>	Wells	Estuary	pH
Wet Ice		Monitoring		
Dry Ice		_		
Ambient		Production		
Other	•	Drinking		Sample Temp. (°C)
	_	Private		
Sample Location D	escription:			
Sample Location 2	Slark 16	266		DO (mg/l)
	your !			
	RI- 6 16	10	1 50-da	
	DIAZO- 1			
	:			Cond. (uMHOS/CM)
			•	Salinity(%)
·				
Remarks:				
	And 7 > 13	•		 _ _ _ _ _
	111111			Sample Split
	And y) is The Tak Red Full	1		☐ Yes ☐ No
		∽ .	· 	1 163 U 170
	Ach	A M.	17	If Yes With Whom?
	per		0	Receipt □ Yes □ No
	•		WZ MZ IN	Receipt Yes No
	11	TELP)	> 401 214	
	Γ = 1		CT 1	

			· · · · · · · · · · · · · · · · · · ·			1 to 1 to 1	
Project Name	Control Ste	1 & DRUM	-	Samples to:			
Collector(s)	m I DA	Affiliation	START	Bact Bio	Chem	- Other	
001100101(0)		- Attination		- Bact Bio	Chem	Öther	
SAMPLING METHO	DD (Circle)	LDMS CODE				لــــــا	
Kemmerer 1	Dredge Ponar Manual			Station No.			
Niskin Net		t DATA BASE	CODE				٦
Trowel Crea	m Dipper	CTA TVDE	CODE		<u> </u>		
Automatic		JOIA. TIPE	E	Sample Depth (I	Ft.)/Fac. Loc	c. Code	
Other Dru	n Thief	_ '	•		–		
, , , , , , , , , , , , , , , , , , ,				_			,
SUBSTRATE TYPE	(Circle) Aqueous	Sediment Sluc	ige Oil Biological	Lab Number			
				Lab Number	· · · · · · · · · · · · · · · · · · ·		
	Solvent E	extract Other (·) `	204	405		
BOD — Seed Suppl	ied □ Yes □ No	Source:		-	100		
	Preparation (Circle)	T	Source Type (Circle)	Type of Sample		1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	
Container	Cleaning Procedure	Landfill	Industrial		omposite	7	
Glass Jar	Detergent Wash	Leachate	Effluent	_ Tir	ne Space		
Plastic Jar	Water Rinse	Drum	Process Stream]	
Metal	Acid Rinse	Test Well	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Collection (Endi	ng) Date		
POA Vial	Solvent Rinse:	Depth:	Holding Pond	Yr Mo	Day		
Cubitainer	Acetone	_	1 - 1 - 2 - 11	918 013	331/		
Acetate Core	Hexane	Other:	Waste Pile	Ending Time (24	Hr)	•	
Paper Cap	Methylene Chloride	Storage Teals	_ Municipal Treatment		∺"		
Teflon Cap	Other (Specify):	Storage Tank	Influent	1095			
Foil Cap	Other (opecity).	Top Middle	Effluent-Cl				
Other		Bottom	Effluent-Non Cl	Beginning Date		•	
Other			Sludge	Yr Mo	Day	•	
Preservation		Truck	Ambient			:	
Acid		Drum Tank	Lake		•		
Solvent	•		Stream	Beginning Time	(24 Hr)		
Chemical		Other	Pond]	•	
Wet Ice		147-11-	Ocean		ل		
Dry Ice	· ·	Wells	Estuary	рН			
Ambient		Monitoring			7		
Other	•	Production					
Outer		Drinking		Sample Temp. (%	-		
0		Private		Adminite Leubr (יי ר		
Sample Location Des	cription:	00067	,				
.	Deun # Black D	DD/ 0/			لي		
7	-/ /			DO (mg/i)	·		
4	Black D	1) 514651	ę		'		
•				<u> </u>	J		
			•	Cond. (uMHOS/C	M)		
•						•	
		<u></u>		Salinity(% ₀)			
Remarks:					7		
F.	MA/7512	:					
! /		•			.]		•
	malysis TCC 1	Tai		Sample Split			
1	/ 66/	IAL		□ Yes □] No		
	ä	,		If Yes With Whom	17		
w.		-	,	Receipt □ Ye	e 🗂 ii.	^	
•		•	•		is N	U	

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey ENVIRONMENTAL SERVICES DIVISION

<u>.</u>				<u> </u>		
	Project Name				Samples to:	
		m/DA	Affiliation	START	Bact Bio Chem Other	
	SAMPLING METHO Kemmerer D Niskin Net Trowel Crea Automatic Other D SUBSTRATE TYPE BOD — Seed Suppl Sample I Container Glass Jar Plastic Jar Metal POA Vial Cubitainer Acetate Core Paper Cap Teflon Cap Foil Cap Other	OD (Circle) Oredge Ponar Manual Seine Trawi Bucket om Dipper (Circle) Aqueous S Solvent Ex	LDMS CODE DATA BASE C STA. TYPE CC Sediment Sludgetract Other (Source: Sample S Landfill Leachate Drum Test Well Depth: Other: Storage Tank Top Middle Bottom Truck	CODE	Samples to: Bact Bio Chem Other	
	Preservation Acid		Drum Tank Other Wells Monitoring Production Drinking	-i −	Beginning Time (24 Hr) pH Sample Temp. (°C)	
-	Sample Location Des	1 Doo68	Private	メ <i>コ</i> シ/	DO (mg/l)	
•	Remarks:	Clear oi	<u> </u>		Cond. (uMHOS/CM) Salinity(% ₀) Sample Split Yes □ No	
		TCL, T.	FIM		If Yes With Whom? Receipt □ Yes □ No	
					-	

Form: FTB RPD-11-82-2

Project Name	entral stul	? Deur	·	Samples to:
00.6	MIDA	Bact Bio Chem Other		
Collector(s)		<u>ک</u>	TART	Bact Bio Chem Other
SAMPLING METHO	D (Circle)	1640.665		
		LDMS CODE		Station No.
	•	DATA BASE	CODE	
Niskin Net	Seine Trawl Bucket			
Trowel Crea	m Dipper	STA, TYPE C	ODE	
Automatic _	70.1	·		Sample Depth (Ft.)/Fac. Loc. Code
Other	un Thing			
				-
SUBSTRATE TYPE	(Circle) Aqueous S	Sediment Slud	ge Oil Biological	Lab Number
	Solvent E	tract Other (:) ·	204407
				204401
BOD — Seed Suppl		Source:		Type of Sample
Sample F	Preparation (Circle)		Source Type (Circle)	Grab Composite
Container	Cleaning Procedure	Landfill	Industrial	Time Space
Glass Jar	Detergent Wash	Leachate	Effluent	
Plastic Jar	Water Rinse	Drum	Process Stream	Callegation (Fadina) Batta
Metal	Acid Rinse	Test Well	Holding Pond	Collection (Ending) Date
POA Vial	Solvent Rinse:	Depth:	Drum	Yr Mo Day
	Acetone	 `	Waste Pile	118 2018 11
Cubitainer		Other:		Ending Time (24 Hr)
Acetate Core	Hêxane	0	Municipal Treatment	
Paper Cap	Methylene Chloride	Storage Tank	Influent	101915151
Teflon Cap	Other (Specify):	Тор	Effluent-Cl	
Foil Cap		Middle	Effluent-Non Cl	Beginning Date
Other		Bottom	Sludge	Yr Mo Day
· · · · · · · · · · · · · · · · · · ·		Truck	Ambient	
Preservation		Drum	Lake	
- Acid		Tank	Stream	Beginning Time (24 Hr)
Solvent		Other	Pond	
Chemical			_ Ocean	
Wet Ice		Wells	Estuary	
	•	Monitoring	_ Lottery	pH
Dry Ice		· -		
Ambient		Production		
Other		Drinking		Sample Temp. (°C)
		Private		Jampie (emp. (*C)
Sample Location Des	scription:	•		
	1 # NOO!	368 - D	المراد المراد	
, D	KUN ()		NO0 68	DO (mg/i)
	<u> </u>		1) 99 48	
•	NA # DOO: SAME D	AS		
•	$\mathcal{I}_{\mathcal{I}}$			Cond. (uMHOS/CM)
,	1)	2068		
		J 0 41		
	,	11		
Danis di da			 	Salinity(% _e)
Remarks:	^			
· /	Ana/4215			
ı				Sample Split
•	TCL, 7.	A-1		
•	j = j - j	· ·		☐ Yes ☐ No
•	OS RA	Fl. pt		If Yes With Whom?
	prom			100 sautti attifillit
			• • • • •	Receipt ☐ Yes ☐ No

Project Name	contrace Steel	5 DRV-		Samples to:
Collector(s)	um/DA	Affiliation -5	TALT	Bact Bio Chem Other
Obligator(a)		T		4 5.00 5.00 5.00
SAMPLING METHO Kemmerer I	DD (Circle) Dredge Ponar Manual	LDMS CODE	-	Station No.
	Seine Trawl Bucket	DATA BASE	CODE	
Trowel Crea	am Dipper	STA. TYPE C	ODE	
Automatic				Sample Depth (Ft.)/Fac. Loc. Code
OtherD	LUM THIFF		and the second second	
· ,- ·	- 	4.,	 	4
SUBSTRATE TYPE	(Circle) Aqueous S	Sediment Slude	ge Oil Biological	Lab Number
	Solvent Ex	tract Other (" • • • • • • • • • • • • • • • • • • •	001100
	OUITEIN EX	itiaot Other (204408
BOD — Seed Supp	lied 🗆 Yes 🗆 No	Source:		Type of Sample
Sample	Preparation (Circle)	Sample S	Source Type (Circle)	Grab Composite
Container	Cleaning Procedure	Landfill	Industrial	Time Space
Glass Jar	Detergent Wash	Leachate	Effluent	
Plastic Jar	Water Rinse	(Drum	Process Stream	Collection (Ending) Date
Metal	Acid Rinse	Test Well	Holding Pond	
POA Vial	Solvent Rinse:	Depth:	Drum	918 013 311
Cubitainer	Acetone	Other:	Waste Pile	
Acetate Core	Hexane		Municipal Treatment	Ending Time (24 Hr)
Paper Cap	Methylene Chloride	Storage Tank	Influent	
Teflon Cap	Other (Specify):	Тор	Effluent-Cl	
Foil Cap		Middle	Effluent-Non Cl	Beginning Date
Other	-	Bottom	Sludge	Yr Mo Day
		Truck	Ambient	
Preservation		Drum	Lake	
Acid		Tank	Stream	Beginning Time (24 Hr)
Solvent	• .	Other	Pond	
Chemical			Ocean	
Wet ice		Wells	Estuary	рН
Dry Ice		Monitoring		
Ambient Other		Production Drinking		
Other	·	Private	,	Sample Temp. (°C)
<u> </u>				-
Sample Location De	scription:	· /		
1)11.11	mitt DOSY	ν,		DO (mg/t)
DR		1.51		
	Rosen Sil	- 20-62	•	
	Brown Sil	· .		Cond. (uMHOS/CM)
	Clear Drown	' - Sラ ⁻ (٠	Cond. (diminosiom)
,	, - U , - U ,	•		
			•	Collectoral
Remarks:			······································	Salinity(% _o)
	Analysis			
•				
				Sample Split
	TCL, 7	AC		☐ Yes ☐ No
		e/		
			•	If Yes With Whom?
				Receipt Yes No
•				

			·		
	Project Name	Contrar Steel	4 DRUM		Samples to:
	Collector(s)^	im IDA	_ Affiliation	TALT	
			- Annation	7.5.14=2	Bact Bio Chem Other
	SAMPLING METHO	OD (Circle)		_ : /	
		Dredge Ponar Manual	LDMS CODE	 	Station No.
			0.7.0.0	CODE	
	Niskin Net	Seine Trawl Bucke	DAIL DAGE	OODE	
	Trowel Crea	am Dipper	STA. TYPE C	ODE	
	Automatic				Sample Depth (Ft.)/Fac. Loc. Code
	Other C/A	55 They	_ '		
					_
	SUBSTRATE TYPE	(Circle) Aqueous	Sediment Slud	ge Oil Biological	
	•	•	•	ge on Biological	Lab Number
		Solvent E	xtract Other (. ')	204400
	DOD 0.46				_ 204409
	BOD — Seed Suppl		Source:		Type of Sample
		Preparation (Circle)	Sample	Source Type (Circle)	Grab Composite
	Container	Cleaning Procedure	Landfill	Industrial	Time Space
	Glass Jar	Detergent Wash	Leachate	Effluent	- Space
	Plastic Jar	Water Rinse	Drum	Process Stream	
	Metal	Acid Rinse	Test Well	Holding Pond	Collection (Ending) Date
	POA Vial	Solvent Rinse:	Depth:	Drum	Yr Mo Day
	Cubitainer	Acetone	Other:	1	918013311
	Acetate Core	Hexane	Other:	Waste Pile	Ending Time (24 Hr)
				Municipal Treatment	Litting Time (24 Hr)
	Paper Cap	Methylene Chloride	Storage Tank	Influent	11005
,	Teflon Cap	Other (Specify):	Тор	Effluent-Cl	
	Foil Cap		Middle	Effluent-Non Cl	Beginning Date
	Other		Bottom	Sludge	Yr Mo Day
		• .	Truck	Ambient	
	Preservation		Drum	Lake	
	Acid	·	Tank	Stream	Paginaina Tima ta
	Solvent		Other	Pond	Beginning Time (24 Hr)
	Chemical			Ocean	
,	Wet Ice		Wells	-	
(Dry Ice			Estuary	pH
	Ambient		Monitoring		
			Production		
	Other		Drinking		
			Private		Sample Temp. (°C)
	Sample Location Des	cription:			1
-		# DO	36		
) X	in # Dos		<i>:</i>	DO (mg/f)
			0 n . +	-1 /10	
		13/25	PAINT	2 1001 22	
	•		₹		
	•				Cond. (uMHOS/CM)
	1			• .	
	· · · · · · · · · · · · · · · · · · ·				Salinity(% ₀)
,	Remarks:				1
	An	M7575			
	//*:	yer (=			
		TCL, TAG	•		Sample Split
		ICL. TAI			
		1 100			☐ Yes ☐ No
		•		.	If Yes With Whom?
			•	.*	ANGUIT
					Receipt
				• •	
					•

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey ENVIRONMENTAL SERVICES DIVISION

	· · · · · · · · · · · · · · · · · · ·	Contras Stee	+ Day	<u> </u>	
P	roject Name	1 2			Samples to:
·C	collector(s)M	m / DA	Affiliation	ALT	Bact Bio Chem Other
	<u> </u>		1		
S	AMPLING METHO	D (Circle)	LDMS CODE		Station No.
	Kemmerer D	redge Ponar Manual		•	Station No.
		Seine Trawi Bucket	DATA BASE	GODE	
	Trowel Crea				
•		III Dîbbei	STA. TYPE CO	ODE	Sample Depth (Ft.)/Fac. Loc. Code
	Automatic	hon This			Company of the control of the contro
	Other	7,000			
			·.l ·		Lead of the second of the seco
s	UBSTRATE TYPE (Circle) Aqueous S	Sediment Sludg	ge Oil Biological	Lab Number
		Solvent Ex	tract Other ()	204410
		5 Yes 5 No	0		201120
<u>B</u>	OD — Seed Suppl		Source:		Type of Sample
_	Sample F	Preparation (Circle)		Source Type (Circle)	Grab Composite
C	ontainer	Cleaning Procedure	Landfill	Industrial	Time Space
G	lass Jar	Detergent Wash	Leachate	Effluent	
<u> </u>	lastic Jar	Water Rinse	Orum	Process Stream	Collection (Ending) Date
= .	letal	Acid Rinse	Test Well	Holding Pond	Collection (Ending) Date
		Solvent Rinse:	Depth:	Drum	Yr Mo Day
	OA Vial		1	! "	918 013 311
-	ubitainer	Acetone	Other:	Waste Pile	Ending Time (24 Hr)
A	cetate Core	Hexane		Municipal Treatment	
P	aper Cap	Methylene Chloride	Storage Tank	Influent	
T	efion Cap	Other (Specify):	Тор	Effluent-Cl	
_	oil Cap		Middle	Effluent-Non Cl	Beginning Date
	ther	· ·	Bottom	Sludge	Yr Mo Day
0			Truck	Ambient	
=				-	
27.5	reservation		Drum	Lake	
.Ac	cid		Tank	Stream	Beginning Time (24 Hr)
Sc	olvent		Other	. Pond	
CI	hemical			. Ocean	
W	et Ice	, .	Wells	Estuary	_1.0
	ry Ice		Monitoring		pH
	mbient		Production		
	· .				
O	ther		Drinking		Sample Temp. (°C)
			Private] Gample 15mp: (6)
Şa	ample Location Des	scription:			
		4- No -			Land
	DOUR =	# Doog			DO (mg/i)
				•	
		Red 1 Dr	21.62 4/1	52010	
		Ked IM	Jun - VI	0	
				PAINT	Cond. (uMHOS/CM)
	*			•	
	i i				
			-		Salinity(% ₀)
D.	marks:				. Sammy(70 ₀)
<u>ne</u>			· · ·		
	A_{N}	2/4515		<i>,</i>	
	//*	v •		,	Sample Split
		PL, TAL	i/		- Compression
	•	$R \leftarrow T$			☐ Yes ☐ No
	J	IN IAC			
	•	02	(M		If Yes With Whom?
	1.	lot To State To	, Par.	•	Receipt Yes No
		クムはヘハングルデス	X 1	• .	Receipt Yes No
	7	2 1/14/ /1/1/	7		· ·

Form: FTB RPD-11-82-2

			(
Project Name	Control Ste	el TI	Deum"	. Samples to:
Collector(s)		Affiliation	TALT	Bact Bio Chem Other
Obliector(s)				
SAMPLING METHO	D (Circle)	I DAS CODE		
Kemmerer D	redge Ponar Manual	EDMIS CODE		Station No.
Niskin Net		DATA BASE	CODE	

Trowel Crea	m Dipper	STA. TYPE C	ODE	Sample Depth (Ft.)/Fac. Loc. Code
Automatic	las This			Cample Depth (Ft.)/Fac. Loc. Code
Other	143= 124			
SUBSTRATE TYPE	(Circle) Aqueous S	Sediment Slud	ge Oil Biological	Lab Number
	Solvent Ex	Anna Othas (.	
•	Solveill Ex	tract Other (•)	204411
BOD — Seed Suppl	ied 🗆 Yes 🗆 No	Source:	· · · · · · · · · · · · · · · · · · ·	
	Preparation (Circle)		Source Type (Circle)	Type of Semple
				Grab Composite
Container	Cleaning Procedure	Landfill	Industrial	Time Space
Glass Jar	Detergent Wash	Leachate	Effluent	
Plastic Jar	Water Rinse	Drum	Process Stream	Collection (Ending) Date
Metal	Acid Rinse	Test Well	Holding Pond	Yr Mo Day
POA Vial	Solvent Rinse:	Depth:	Drum	1918 013 311
Cubitainer	Acetone	Other:	_ Waste Pile	
Acetate Core	Hexane	<u> </u>	Municipal Treatment	Ending Time (24 Hr)
Paper Cap	Methylene Chloride	Storage Tank	Influent	
Teflon Cap	Other (Specify):	Тор	Effluent-Cl	0 1 3
Foil Cap	Care (epocas),	Middle	Effluent-Non Cl	Beginning Date
Other		Bottom	Sludge	Yr Mo Day
		Truck	Ambient	
Preservation	•	Drum	Lake	
Acid		Tank	Stream	Beginning Time (24 Hr)
Solvent		Other	_ Pond	
Chemical		<u> </u>	Ocean	
Wet Ice		Wells	Estuary	pH
Dry Ice		Monitoring	7	
Ambient		Production		
Other		Drinking	1	
		Private		Sample Temp. (°C)
	••••		<u> </u>	
Sample Location Des	H DOO9 - Pink w/		•	
λ.	H D009 -		÷	20.4
(yw m.				DO (mg/i)
	V 1 121	9/an	STRIALIONS	
•	110	2000		
•	DAI	+		Cond. (uMHOS/CM)
	77162	,		
•				
•				
Demorks		···		Salinity(% _o)
Remarks:	4			
· //	mal si			
/ /	1 26 1513	V	•	Sample Split
	Androis TCC, TA		•	ipie Opiit
	TCL TA	7		☐ Yes ☐ No
•	1 11	<u></u>		
			•	If Yes With Whom?
	M5-1	MJA		Receipt Yes No
	(M)			

_		(Catheren 15	E. / +	3.		
	Project Name	Contral St		Dava	_ Samples to:	
	Collector(s)	MMIDA	_ Affiliation		Bact Bio Chem Other	
	SAMPLING METHO	OD (Circle)				
	•	Oredge Ponar Manual			Station No.	
	Niskin Net			CODE		_
	Trowel Crea		•			
	Automatic	it militari	STA. TYPE C	ODE	Sample Donth (Ex VE 1	لــ
	Other	ASS they			Sample Depth (Ft.)/Fac. Loc. Code	
	SUBSTRATE TYPE	(Circle) Aqueous	Sediment Slud	ge Oil Biological		
	- · · · · · · · · · · · · · · · · · · ·		5.00	a on biological	Lab Number	
		Solvent E	xtract Other ()	204412	
·	BOD — Seed Suppl	ied	Source:	<u> </u>		
		Preparation (Circle)		Source Type (Circle)	Type of Sample	
	Container	Cleaning Procedure	Landfill	Industrial	Grab Composite	
	Glass Jar	Detergent Wash	Leachate	Effluent	Time Space	
	Plastic Jar	Water Rinse	Drum	Process Stream		
	Metal	Acid Rinse	Test Well	Holding Pond	Collection (Ending) Date	
	POA Vial	Solvent Rinse:	Depth:	Drum	Yr Mo Day	
	Cubitainer	Acetone	Other:	Waste Pile	918 013 311	
	Acetate Core	Hexane		Municipal Treatment	Ending Time (24 Hr)	
	Paper Cap	Methylene Chloride	Storage Tank	Influent		
	Teflon Cap	Other (Specify):	Тор	Effluent-Cl		
	Foil Cap		Middle	Effluent-Non Cl	Beginning Date	
	Other	,	Bottom	Sludge	Yr Mo Day	
			Truck	Ambient		
	Preservation		Drum	Lake		-
	Acid		Tank	Stream	Beginning Time (24 Hr)	
	Solvent		Other	Pond	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	Chemical			Ocean		
	Wet Ice		Wells	Estuary	pH	_
	Dry Ice		Monitoring			
	Ambient		Production			٠
	Other		Drinking			
			Private		Sample Temp. (°C)	
	Sample Location Des				7	
	Dans	P 10010 -	•	, .		
	Dice	ب ر د پ	•		DO (mg/l)	
		HODOLO FOR	~ U1510) J		
				PACE T		
	•		1, 1	(1/ Inc)	Cond. (uMHOS/CM)	
		•				
				•		
<u> </u>				·	Salinity(% _e)	
	Remarks:		* · · · · · · · · · · · · · · · · · · ·			
	Ar	17215		•		
					Service 11	
٠		TCC TAL		•	Sample Split	
					☐ Yes ☐ No	
		Pilo MA				
		KIO 1		,	If Yes With Whom?	
		RH RCRA	7 //	ot.	Receipt ☐ Yes ☐ No	
		<i>y</i>		•		
		Y		•	· · · · · · · · · · · · · · · · · · ·	

					ay maka 4 ang kabupatan kabupatan kabupatan kabupatan kabupatan kabupatan kabupatan kabupatan kabupatan kabupat
	Project Name	come steel			Samples to:
	Collector(s)	m DA	Affiliation	TALT	Bact Bio Chem Other
	Collector(s)		Aimiation 2		4 5.5 5.6.1
	SAMPLING METHO	D (Circle)	LDMS CODE		
		redge Ponar Manual	LUMIS CODE		Station No.
		Seine Trawl Bucket	DATA BASE	CODE	
			•		
		m Dipper	STA. TYPE C	ODE	Sample Depth (Ft.)/Fac. Loc. Code
	Automatic				
	Other		•		
					─ ───────────────────────────────────
	SUBSTRATE TYPE (Circle) Aqueous	Sediment Slud	ge Oil Biological	Lab Number
		Solvent E	xtract Other (1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	004440
					204413
	BOD — Seed Suppl	ied 🗆 Yes 🗆 No	Source:		Type of Sample
		Preparation (Circle)	Sample	Source Type (Circle)	Grab Composite
	Container	Cleaning Procedure	Landfill	Industrial	Time Space
(Glass Jar	Detergent Wash	Leachate	Effluent	- Time Space
. \	Plastic Jar	Water Rinse	Drum	Process Stream	
		Acid Rinse			Collection (Ending) Date
	Metal	**************************************	Test Well	Holding Pond	CYr Mo Day
	POA Vial	Solvent Rinse:	Depth:	Drum	1 780331
	Cubitainer	Acetone	Other:	_ Waste Pile	Ending Time (24 Hr)
	Acetate Core	Hexane		_ Municipal Treatment	Little (24 Til)
	Paper Cap	Methylene Chloride	Storage Tank	Influent	11101215
	Teflon Cap	Other (Specify):	Тор	Effluent-Cl	
	Foil Cap		Middle	Effluent-Non Ci	Beginning Date
	Other		Bottom	Sludge	Yr Mo Day
			Truck	Ambient	
	Preservation		Drum	Lake	
	Acid		Tank	Stream	Beginning Time (24 Hr)
	Solvent	•	Other	Pond	
	Chemical	·		Ocean	
	Wet Ice		Wells	Estuary	
(Dry Ice		Monitoring	∃ = 0.00.,	pH
	Ambient		Production		
			1	1	
	Other		Drinking		Sample Temp. (°C)
			Private	<u> </u>	
	Sample Location Des	scription:		1	
		011			20 (
	Drum # D	011			DO (mg/l)
	Drive I	~		•	
	•			205 Stant	
	4	DIST		front.	Cond. (uMHOS/CM)
				•	
			4	•	
		,			
	Para artico				Salinity(% _e)
	Remarks:	AM-ISTX -			
	(1)	Mysia - The			
			/		Sample Split
	•	1 5	/-		
	·	/Ch /	IAC		☐ Yes ☐ No
		/			If Yes With Whom?
			•	•	ir 192 AAITU AAUOMA
	;				Receipt Yes No
				· · · · · · · · · · · · · · · · · · ·	

	Project Name	Contral ST		Deun	Samples to:
	Collector(s)	IM / DA	Affiliation	TART	Bact Bio Chem Other
	Niskin Net Trowel Crea Automatic	redge Ponar Manual Seine Trawl Bucket	DATA BASE	CODE	Station No. Sample Depth (Ft.)/Fac. Loc. Code
	SUBSTRATE TYPE ((Circle) Aqueous	Sediment Slud	ge Oil Biological	Lab Number
			xtract Other ()	204414
	BOD — Seed Suppl	ied 🛘 Yes 🗎 No	Source:		Type of Sample
	Sample F	Preparation (Circle)	Sample	Source Type (Circle)	Grab Composite
	Container	Cleaning Procedure	Landfill	Industrial	Time Space
(Glass Jar	Detergent Wash	Leachate	Effluent	
	Plastic Jar	Water Rinse	Drum)	Process Stream	Collection (Ending) Date
	Metal	Acid Rinse	Test Well	Holding Pond	Yr_ Mo Day
	POA Vial	Solvent Rinse:	Depth:	Drüm	1918 013 31/1
	Cubitainer	Acetone	Other:	_ Waste Pile	
	Acetate Core	Hexane		_ Municipal Treatment	Ending Time (24 Hr)
	Paper Cap	Methylene Chloride	Storage Tank	Influent	1 0 3 0
	Teflon Cap	Other (Specify):	Тор	Effluent-Cl	
`	Foil Cap		Middle	Effluent-Non Cl	Beginning Date
	Other		Bottom	Sludge	Yr Mo Day
			Truck	Ambient	
	Preservation		Drum	Lake	
	Acid		Tank	Stream	Beginning Time (24 Hr)
	Solvent		Other	_ Pond	
	Chemical			Ocean	
,	Wet Ice		Wells	Estuary	
,	Dry Ice		Monitoring		pH
	Ambient		Production		
	Other		Drinking		
	Outoi		Private		Sample Temp. (°C)
		1.11	Tivate		
	Sample Location De			•	
	Day	nt Doa7	٠		DO (mg/i)
	17,00		,		
		Brown Prin Clean liqu	+ -3301	-	
					Cond. (uMHOS/CM)
		Clean I in		ĺ.	
		1.45	C.S.		
	• .				Salinity(% _e)
	Remarks:				January (766)
	1 10111011101			• .	
	Ana	Hysia -	•		Sample Split
	/ / *	the state of the s	•		☐ Yes ☐ No
		TCL			If Yes With Whom?
			15-1		11 169 AMILI AMIONIX
		TCL, T PCRA	F1. 17		Receipt
		•	, , , , , ,		•

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey ENVIRONMENTAL SERVICES DIVISION

		· · · · · · · · · · · · · · · · · · ·			<u> </u>			
Project Name	Contras Steel	4 Dr.um		Samples	to:	,		
Collector(s)M	~ DA	- Affiliation - 57	ALT	Bact	Bio	Chem	Other	٦.
					510	Citetii	Other	
SAMPLING METHO	OD (Circle)	LDMS CODE	·		<u> </u>			
Kemmerer	Dredge Ponar Manual			Station I	NO.			
Niskin Net	Seine Trawl Bucke	DATA BASE	CODE					1
Trowel Crea	am Dipper	STA TYPE	CODE					
Automatic		STA. TYPE	ODE	Sample I	Depth (Ft.)/Fac. Lóc	Code	
Other	glass their]	, 0000	
SUBSTRATE TYPE	(Circle) Aqueous	Sediment Sluc	lge Oil Biological	l at North		j		
				Lab Nurr	iber		_	
	Solvent E	xtract Other (• • • • • • • • • • • • • • • • • • • •		044	15		
BOD — Seed Supp	lied ☐ Yes ☐ No	Course			044	<u> 10</u>		
	Preparation (Circle)	Source:		Type of S	ample	•		
Container	Cleaning Procedure		Source Type (Circle)	_ Grab	2 Cor	nposite	•	
Glass Jar	Detergent Wash	Landfill	Industrial	41	Time	Space]	
	1	Leachate	Effluent	Li			·	
Plastic Jar	Water Rinse	Drum	Process Stream	Collectio	n (Endino) Date		
Metal	Acid Rinse	Test Well	Holding Pond	V.	Мо	Day		
POA Vial	Solvent Rinse:	Depth:	Drum	1918	013			
Cubitainer	Acetone	Other:	_ Waste Pile		نسلت			•
Acetate Core	Hexane		Municipal Treatment	Ending T	me (24 H	r)		
Paper Cap	Methylene Chloride	Storage Tank	Influent	110	35			
Teflon Cap	Other (Specify):	Тор	Effluent-Cl		22			
Foil Cap		Middle	Effluent-Non Cl	Beginning	Date		•	
Other		Bottom	Sludge	Yr	Мо	Day		
		Truck	Ambient					
Preservation		Drum	Lake			·		
Acid		Tank	Stream	Beginning	Time (24	i Hr)		
Solvent		Other	Pond			,		
Chemical			Ocean		-			•
Wet Ice		Wells	Estuary	рН				
Dry Ice		Monitoring	1	I Pri		•		
Ambient		Production			1 1			
Other	*	Drinking	.'					
		Private		Sample To	emp. (°C)			
Sample Location Des	scription:		1	4		,		
			•					
•	Drum 1	1020-	· ·	DO (mg/l)				
	0							
	leddion	191200	U(2000					
	Deum H E Reddion	PAINT		Cond. (uM	HOSION		•	
	•	there's		Cond. (div	INCO/CM)	<u> </u>		
•			•			لــــــــــــــــــــــــــــــــــــــ		
Remarks:				Salinity(%	<u>(i)</u>			
	1.			\prod		-		
4 .	MALYSIS	•						
5 grelor buter	A second second		•	Sample S	olit			
5 4"	TEL, TA	<i>C</i> .	•	1				
المناك الم		_		□ Ye	s 🗆	No		
P -	Reng FI	. 15	* •	If Yes Wit	Whom?			
			*					
	FULL	TELP		Receipt	□ Yes	D. No		
	/ = /	10-1		·Į				,

Form: FTB RPD-11-82-2

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey ENVIRONMENTAL SERVICES DIVISION

Project Name	Central Stiel	+ Dava		Samples to:
			TART	Bact Bio Chem Other
Collector(a)		- Anniation		4
Niskin Net Trowel Cre Automatic	Dredge Ponar Manual Seine Trawl Bucket	DATA BASE O	CODE	Station No. Sample Depth (Ft.)/Fac. Loc. Code
SUBSTRATE TYPE	(Circle) Aqueous	Sediment Sludg	je Oil Biological	Lab Number
	Solvent E	xtract Other ()	204416
BOD — Seed Supp		Source:	Source Type (Circle)	Type of Sample
	Preparation (Circle)	Landfill	Industrial	Grab Composite
Container	Cleaning Procedure			_ Time Space
Glass Jar Plastic Jar Metal POA Vial Cubitainer Acetate Core Paper Cap Tefion Cap Foil Cap Other Preservation Acid	Detergent Wash Water Rinse Acid Rinse Solvent Rinse: Acetone Hexane Methylene Chloride Other (Specify):	Leachate Drum Test Well Depth: Other: Storage Tank Top Middle Bottom Truck Drum Tank	Effluent Process Stream Holding Pond Drum Waste Pile Municipal Treatment Influent Effluent-Cl Effluent-Non Cl Sludge Ambient Lake Stream	Collection (Ending) Date Yr Mo Day 9 3 0 3 3 / Ending Time (24 Hr) Beginning Date Yr Mo Day Beginning Time (24 Hr)
Solvent	-	Other	Pond Ocean	
Chemical Wet Ice Dry Ice Ambient Other	-	Wells Monitoring Production Drinking Private	Estuary	pH Sample Temp. (°C)
Sample Location D	escription:	- 		7
DK.	Multi eslan Bom 1914			DO (mg/i) Cond. (uMHOS/CM) Salinity(%)
Remarks:	MALYSIS TEC, TAC RERA FULL	<u>-,</u>		Sample Split Yes No If Yes With Whom?
	RCRA FULL	FI.DT.		Receipt Yes No

Form: FTB RPD-11-82-2

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey ENVIRONMENTAL SERVICES DIVISION

	Contrac Steel			Samples to:
	m/DA	Affiliation	PRT	Bact Bio Chem Other
Collector(s)		Allination		
SAMPLING METHO	D (Circle)	1040 0005		
		LUMS CODE		Station No.
1		DATA BASE	CODE	
Niskin Net	Seine Trawi Bucket	1		
Trowel Crea	m Dipper	STA. TYPE C	ODE	
Automatic				Sample Depth (Ft.)/Fac. Loc. Code
Other9	ws this	.		
SUBSTRATE TYPE	(Circle) Aqueous	Sediment Slud	ge Oil Biological	Lab Number
SUBSTRATE TIFE	(Olicie) Addeoss	Occument Singl		Lab littliner
	Solvent E	xtract Other (.)	204417
				204411
BOD — Seed Suppl	ied 🗆 Yes 🗀 No	Source:		Type of Sample
	Preparation (Circle)	Sample S	Source Type (Circle)	Grab Composite
Container	Cleaning Procedure	Landfill	Industrial	Time Space
	Detergent Wash	Leachate	Effluent	-
Glass Jar	1 '' •			
Plastic Jar	Water Rinse	Drum	Process Stream	Collection (Ending) Date
Metal	Acid Rinse	Test Well	Holding Pond	Yr Mo Day
POA Vial	Solvent Rinse:	Depth:	Drum	1918 013 311
Cubitainer	Acetone	Other:	_ Waste Pile	
Acetate Core	Hexane		Municipal Treatment	Ending Time (24 Hr)
	Methylene Chloride	Storage Tank	Influent	
Paper Cap	· ·		Effluent-Cl	1111012101
Teflon Cap	Other (Specify):	Тор		
Foil Cap		Middle	Effluent-Non Cl	Beginning Date
Other		Bottom	Sludge	Yr Mo Day
		Truck	Ambient	
Preservation	1	Drum	Lake	
Acid	į	Tank	Stream	Beginning Time (24 Hr)
		Other	Pond	
Solvent		Other	-}	
Chemical			_ Ocean	
Wet Ice		Wells	Estuary	рН
Dry Ice		Monitoring		
Ambient		Production		
Other	•	Drinking		
		Private		Sample Temp. (°C)
Sample Location De				
A	# Po 310	- Die	d	DO (ma/l)
Drow	1 40 212		- 0	DO (mg/l)
•		Ť	010	
•		-	•	
	SAME AS	Λ		Cond. (uMHOS/CM)
	UAME AS	1)0(2	7	Court (DINITOGOM)
e.	= /		•	
			•	
	· · · · · · · · · · · · · · · · · · ·	·		Salinity(%)
Remarks:			·	
	A		•	
•	Analy Sis			
•	11. 416 1 210			Sample Split
	TCL, TH RCRA			
	TCC 72	21	,	☐ Yes ☐ No
	1 17	-1		
	1 2		· · · · · · · · · · · · · · · · · · ·	If Yes With Whom?
	KCKA	F-1.0T		Receipt Yes No
		J. Cake		Receipt Yes No

FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey ENVIRONMENTAL SERVICES DIVISION

	Project Name	Contract Ste	J + 1	XUA	Samples to:		
	Collector(s)	im/DA		START	Bact Bio	Chem	Other
	Conector(s)		Amiliation	~ /// / / / / / / / / / / / / / / / / /		One	Other
	SAMPLING METHO Kemmerer D Niskin Net Trowel Crea Automatic Other	Oredge Ponar Manual Seine Trawl Bucket m Dipper	DATA BASE	CODE	Station No. Sample Depth (F	t.)/Fac. Loc	c. Code
	OtherN	الدسام					
	SUBSTRATE TYPE	Solvent Ex	Sediment Sluc ktract Other (ige Oil Biological	Lab Number	118	
		Preparation (Circle)	-,	Source Type (Circle)	Type of Sample Grab Co	ann már a l'An	
•	Container	Cleaning Procedure	Landfill	Industrial		mposite	ì
	Glass Jar Plastic Jar Metal POA Vial Cubitainer Acetate Core Paper Cap Teflon Cap Foil Cap	Detergent Wash Water Rinse Acid Rinse Solvent Rinse: Acetone Hexane Methylene Chloride Other (Specify):	Leachate Drum Test Well Depth: Other: Storage Tank Top Middle	Effluent Process Stream Holding Pond Drum Waste Pile Municipal Treatment Influent Effluent-Cl Effluent-Non Cl	Collection (Ending 19 Mo 13 Part 19 Pa	Day	
	•		1			1	r .
	Other	,	Bottom	Sludge	Yr Mo	Day	
	D		Truck	Ambient		4-4	
	Preservation	•	Drum	Lake			· · · · · · · · · · · · · · · · · · ·
	Acid		Tank	Stream	Beginning Time (24 Hr)	
	Solvent		Other	_ Pond			
	Chemical			Ocean			
	Wet Ice	• •	Wells	Estuary	рH		
	Dry Ice		Monitoring	· ·		7	
	Ambient		Production				•
	Other	·	Drinking			_}	
			Private		Sample Temp. (°C)	•
	Sample Location Des		[1		٦	
			-		DO (mg/l)		
		Brown P.	PAINT SO	hunks	Cond ((A)) (Cond		
		· · · · · · · · · · · · · · · · · · ·			Cond. (uMHOS/C	M)	
					Callata, ear 1		
	Remarks:	81 cy 18			Salinity(% _o)		·
					Sample Split		
	٠.		•		☐ Yes [∃ No	
		TC4 7	46		if Yes With Whom	n?	
		<i>i</i>			Receipt 🗆 Y		١
	. ·	M5 MSD				ایا د	10
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FIELD DATA SHEET

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey ENVIRONMENTAL SERVICES DIVISION

Project Name		+ Drow		Samples to:
Collector(s)	MM/DA	کے Affiliation	TART	Bact Bio Chem Other
SAMPLING METHO	OD (Circle)	LDMS CODE		Station No.
Kemmerer [Dredge Ponar Manual			Clation No.
	Seine Trawl Bucket	DATA BASE	CODE	
Trowel Crea		CTA TUBE C	ODE	
Automotio		SIA. TIPE O		Sample Depth (Ft.)/Fac. Loc. Code
Other	trond			
O(1161				
SUBSTRATE TYPE	(Circle) Aqueous	Sediment Slud	ge Oil Biological	Lab Number
SOBSTRATETIE	(Oncie) Adacous	Jedinient Gida	80 OII DIOIOGIDAI	Cab Number
	Solvent E	ctract Other (• ')	204419
			· · · · · · · · · · · · · · · · · · ·	204413
BOD — Seed Supp		Source:		Type of Sample
Sample	Preparation (Circle)		Source Type (Circle)	Grab Composite
Container	Cleaning Procedure	Landfill	Industrial	Time Space
Glass Jar	Detergent Wash	Leachate	Effluent	
Plastic Jar	Water Rinse	Drum	Process Stream	Collection (Ending) Date
Metal	Acid Rinse	Test Well	Holding Pond	CYr Mo Day
POA Vial	Solvent Rinse:	Depth:	Drum	918 013 3 1/
Cubitainer	Acetone	Other:	_ Waste Pile	
Acetate Core	Hexane		Municipal Treatment	Ending Time (24 Hr)
Paper Cap	Methylene Chloride	Storage Tank	Influent	7/10/5/5
Tefion Cap	Other (Specify):	Тор	Effluent-Cl	
Foil Cap		Middle	Effluent-Non Cl	Beginning Date
Other		Bottom	Sludge	Yr Mo Day
		Truck	Ambient	
Preservation	-	Drum	Lake	
Acid		Tank	Stream	Beginning Time (24 Hr)
Solvent	•	Other	_ Pond	
Chemical			_ Ocean	
Wet Ice	Ï	Wells	Estuary	
Dry Ice	·	Monitoring	- 20109//	pH
Ambient		Production		
• • •		Drinking		
Other		1		Sample Temp. (°C)
		Private	<u> </u>	-
Sample Location De	Scluer (50			
\sim	# Do.	7 60 -	· · · · · · · · · · · · · · · · · · ·	DO (mg/i)
	5.1.			
•	06100 (30)	~ 7. J.	2131	
*		, -		Cond. (uMHOS/CM)
•				
	•			
		·	<u> </u>	Salinity(% _e)
Remarks:				
	A		•	
P.	MALYSIX			
· /	MALYSIS TCL, TA			Sample Split
	A 1			☐ Yes ☐ No
	ICC, IA	_		— ; · ·
				If Yes With Whom?
		* .	e.	Receipt Yes No
				169 L NO

FIELD DATA SHEET
ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey ENVIRONMENTAL SERVICES DIVISION

	Project Name	Contral Ster	1 + D	rum	Samples t	o:				
	Collector(s)	MM/DA	Affiliation	START	Bact	Bio	Chem	Othe	er	
	Niskin Net	Oredge Ponar Manual Seine Trawl Bucket	DATA BASE	CODE	Station N	o.			/ 	
	Trowel Crea	m Dipper	STA. TYPE C	ODE	Sample D	enth (Et	VEac Lo	r. Cod		
	Automatic // Other	rowel						J. 000		
	SUBSTRATE TYPE		Sediment Slud	lge Oil Biological	Lab Numi		-			
			tract Other () 		044	20			
	BOD — Seed Supp		Source:	Source Type (Circle)	_ Type of S	ample		, -		•
		Preparation (Circle) Cleaning Procedure	Landfill	Industrial	Grab		mposite	٦		
	Container Glass Jar	Detergent Wash	Leachate	Effluent	┦	l im	e Space			
(Plastic Jar	Water Rinse	Drum	Process Stream	Cellection	· /Fadla		ب		
	Metal	Acid Rinse	Tost Well	Holding Pond	Collection			1		
	POA Vial	Solvent Rinse:	Depth:	Drum	918	Mo 13	Day			
	Cubitainer	Acetone	Other:	Waste Pile			1	ļ		
	Acetate Core	Hexane		Municipal Treatment	Ending Ti	me (24 l	dr)			
	Paper Cap	Methylene Chloride	Storage Tank	Influent	94	MM	/	05	_	
	Teflon Cap	Other (Specify):	Тор	Effluent-Cl		791] / '	ررب	ر	
_	Foli Cap		Middle	Effluent-Non Cl	Beginning	Date				
	Other		Bottom	Sludge	Yr	Мо	Day			
			Truck	Ambient]		
	Preservation		Drum	Lake						
	Acid		Tank	Stream	Beginning	Time (2	24 Hr)			
	Solvent		Other	Pond			1			•
	Chemical	•		Ocean		L_	J			
(Wet Ice)		Wells	Estuary	рH	·				
	Dry ice		Monitoring				7			
	Ambient		Production							
	Other		Drinking		Sample T	emp (°C	3			
			Private			emp. (C	ำ			
	Sample Location De			•						
		Down # DO	361 -	Done d	DO (mg/l)	-	- า			
		D	06/]			
•		Down # DO DO SAME	As DO	6/	Cond. (ul	HOS/CI	M) 1]		
		 			Salinity(%	00)				
	Remarks:	Analysis tec								
		3			Sample S	plit				
		tel 1	TAL		□ Y	es [3 No			
					If Yes Wit	h Whon	1?			
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			•		Receipt	□ Y4	es 🗆	NO		
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CENTRAL STEEL & DRUM SITE 704-738 Doremus Ave. Block 5074, Lot 1 Newark, Essex County New Jersey 07105

Drum/Waste Pile Sampling Event March 31, 1998

Attachment III

X-Ray Fluorescence Report April 22, 1998

X-RAY FLUORESCENCE ANALYSIS

CENTRAL STEEL AND DRUM SITE

Newark, New Jersey

Prepared by:

Superfund Technical Assessment and Response Team
Roy F. Weston, Inc.
Federal Programs Division
Edison, New Jersey

Prepared for:

U.S. Environmental Protection Agency Region II Edison, New Jersey

DCN #: START-02-F-001737 TDD #: 02-97-09-0008 EPA Contract No.: 68-W5-0019

Approved by:

EPA

Ray Klimcsak Project Manager

Joseph M. Soroka, Quality Assurance Officer

Lou Diguardia, On-Scene Coordinator

Date: 3/20/88

Date:

TABLE OF CONTENTS

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2.0 METHODS

- 2.1 Sample Preparation In-situ
- 2.2 XRF Analysis
- 2.3 Detection and Quantitation Limits
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APPENDIX A -FIELD DATA SHEETS

1.0 Introduction

The Region II Superfund Technical Assessment and Response Team (START) provided on-site analytical services for X-Ray Fluorescence (XRF) of waste pile samples at the Central Steel and Drum site in Newark, New Jersey on 9 March 1998 under TDD number 02-97-09-0008. Samples were analyzed in-situ.

A Spectrace Model 9000 field portable XRF spectrometer was used in order to assure the timely acquisition of all the data. Samples were not sent for confirmation analysis; the data obtained therefore satisfy QA-1 (screening) criteria.

2.0 Methods

Region II START conducted sampling at 20 points in the waste pile during the course of this investigation. Sample locations were identified using site references and documented in site logbooks.

2.1 Sample Preparation - In-situ

After the surface debris were removed, a 6" x 6" area was mixed and flattened using dedicated plastic scoops and spoons. Any surface debris and sharp objects which could rupture the XRF probe window was removed. A piece of fresh 0.2 mil Mylar X-ray film was used to cover the probe of the XRF prior to analysis in order to avoid cross-contamination between samples.

2.2 XRF Analysis

A Spectrace Model 9000 XRF unit (S/N Q-044) was used for the analysis. This unit is equipped with three radioactive isotope sources; Cd-109, Fe-55, and Am-241. The analytes of concern at the site are lead (Pb). The initial counting times for the Cd-109, Fe-55 and Am-241 sources were set at 30 seconds for the Cd-109 source and 15 seconds each for the Fe-55 and Am-241 sources.

An energy calibration check, resolution check and zero check were performed to assure that the instrument was operating within specifications. Additionally, three NIST standards (NIST 2709, 2710 and 2711) and a sample of Ottawa sand (used as a blank to confirm that there was no cross-contamination) were analyzed periodically as detailed in the following sections.

XRF analysis was conducted in accordance with EPA/ERT SOP #1713, Spectrace 9000 Field Portable X-Ray Fluorescence Operating Procedures, as well as, the instrument instruction manuals.

2.3 Detection and Quantitation limits

A low-concentration standard, NIST #2709 (lead = 18.9 ppm), was analyzed at the beginning and end of each day and after every 10 samples. The standard deviation (SD) of the non-consecutive analysis was used to calculate the method detection limit (MDL) and method quantitation limits (MQL) for the analytes. The MDL is defined as three times the SD of the analyses in ppm, while the MQL is defined as ten times the SD in ppm.

2.4 Application Model Verification

The Spectrace 9000 fundamental parameters model was verified by the analysis of a mid-concentration standard, NIST #2711 (lead = 1,162 ppm) and a high-concentration standard, NIST #2710 (lead = 5,532 ppm), consecutive to the analysis of the NIST #2709 standards. The results of these standards are used to estimate the precision and accuracy of the Spectrace 9000.

2.5 XRF Confirmation by ICP

In order for the XRF data to qualify as QA-2 level data, at least 10% of the samples are sent to a laboratory for analysis by inductively coupled plasma emission spectrometry (ICPES). A regression analysis of the ICPES and XRF data must yield a coefficient of determination, r^2 , greater than 0.7 (ERT/EPA Quality Assurance Technical Bulletin on Field Portable X-ray Fluorescence, May 1991). The model obtained by the regression is used to validate or adjust the Spectrace 9000 results.

No confirmation was obtained for this event; the data therefore qualifies as QA-1 data.

3.0 Quality Assurance/Quality Control

The following Quality Assurance (QA) protocols were used to insure the integrity of the data collected by the Spectrace 9000:

- 1. The use of chain of custody forms and field logs.
- 2. Daily instrument checks (Energy Calibration Check, Resolution Check, and Zero Check).
- 3. Initial and continuing analysis of NIST standards and a sand blank.
- 4. Field duplicate and replicate samples were collected and analyzed for at least 10% of the sample locations.
- 5. Minimum MDL and MQL were calculated for all analytes of interest.

4.0 Results and Discussion

4.1 Sample Results

Twenty areas of the waste pile at the Central Steel and Drum site were analysed in-situ by XRF for lead. Table 1 contains a summary of the results. Lead concentrations ranged from 167 ppm to 9480 ppm. Only three sampling points had lead concentrations below 500 ppm.

4.2 NIST Results

Table 2 details the raw data for the non-consecutive analysis of the NIST #2709 standard for lead. Calculated detection (MDL) and quantitation (MQL) limits are 29 and 290 ppm, restpectively. Table 2 also details the raw data results of the non-consecutive analysis of standards NIST #2710 and NIST #2711 and the SAND blank. The NIST certified lead concentrations in standard #2710 is 5,532 ppm. The average results for the XRF analysis was 4720 ppm or a relative percent difference (RPD) of 14.6. For standard #2711, the NIST certified value for lead is 1,162 ppm. The average XRF results was 1052 ppm (9.5% RPD). The lower average results obtained by the XRF for the NIST standards are as expected and are due to particle size effects. They are consistent with previous XRF results.

4.3 Replicate and Duplicate Results

Two duplicate measurements were obtained with RPD of 9.9% and 19.2%. These results indicate that the samples were relatively homogenous. Two replicates measurements were also obtained with RPD of 5.5% and 1.2%. Duplicate measurements are obtained by moving the sampling probe several inches for the second measurement and are indicative of sample homogeneity. Replicate measurements are a second measurement obtained without moving the sample probe and are indicative of the instrument precision.

5.0 Conclusions

Twenty samples were analysed in-situ using the Spectrace XRF for lead. Lead concentrations ranged from 167 ppm to 9480 ppm. QA results show that the XRF was operating to specifications.

TABLE 1:

XRF ANALYSIS OF CENTRAL STEEL AND DRUM SAMPLES

9 March 1998

Sample identification		Lead (in ppm)	<u>1</u>
Pile 1	في دد	1190	
Pile 2		1870	•
Pile 3		1280	
Pile 4		9480	•
Pile 5	•	950	•
Pile 5 Duplicate		860	(RPD=9.9%)
Pile 6		3520	
Pile 7		9450	
Pile 8		167 J	
Pile 9		1140	
Pile 10		3890	
Pile 10 Replicate		3680	(RPD=5.5%)
Pile 11		6490	
Pile 12		4420	•
Pile 13		2820	
Pile 13 Duplicate	•	3420	(RPD=19.2%)
Pile 13 duplicate replicate		3380	(RPD=1.2%)
Pile 14		448	
Pile 15		990	
Pile 16		8050	
Pile 17	•	9320	
Pile 18	•	269 J	
Pile 19 (paint waste)		3060	•
Pile 20		3450	

¹ In-situ measurements using Spectrace 9000 XRF. Counting times of 30/15/15 seconds for Cd-109/Fe-55/Am-241 sources.

J - Between calculated detection and quantitation limits.

TABLE 2:

XRF ANALYSIS OF STANDARDS 9 March 1998

	SAND	NIST 2709	NIST 2710	NIST 2711
	20	39	4410	1100
•	26	-4.6	4460	1057
* .	-14	52	5070	1020
	-23	-3.5	4940	1030
Average:	2.3	20.8	4720	1052
NIST Conc:		18.9	5532	1162
Standard deviation	24.4	29.1	. · ·	
MDL (calculated)		87	·	-
RPD			14.6	9.5

APPENDIX A FIELD DATA SHEETS

CENTRAL STEEL & DRUM SITE 704-738 Doremus Ave. Block 5074, Lot 1 Newark, Essex County New Jersey 07105

Drum/Waste Pile Sampling Event March 31, 1998

Attachment IV

U.S EPA Region II, RCRA Report November 25, 1997



RCRA REPORT

Central Steel Drum Doremus Ave & Delaney Newark, NJ

November 25, 1997

Participating Personnel:

U.S. Environmental Protection Agency

Thuan M. Tran, Environmental Scientist Kathleen Savino, Environmental Scientist

Dave Dugan, NEIC

Report Prepared By:

Thuan M. Tran, Environmental Scientist

Approved for the Director By:

Dore LaPosta, Chief,

Monitoring & Assessment Branch

RCRA Sampling Investigation

Objective

On November 25, 1997, the US Environmental Protection Agency (USEPA) conducted a RCRA sampling investigation of Central Steel Drum, Newark, NJ. The purpose of the inspection was to determine whether the permittee is in compliance with RCRA regulations.

Site Location & Description

Central Steel Drum is located on the corner of Doremus Avenue and Delancey Street in Newark, New Jersey. The abandoned facility is located in a heavily industrialized area. The sampling location for this investigation was within a warehouse that is approximately 150 yards from the gate entrance. The warehouse contained approximately 300, 55-gallon drums that ranged from half to completely full.

Sampling & Locations

A sampling team entered the warehouse with the proper personal protective equipment to survey the area and to place the necessary sampling containers on the respective drums. Thirty four (34) drums were located to be sampled and certified clear 8 oz. glass jars with Teflon-lined lids were placed on there drums for the samplers (See Figure 1 for drum list). The sampling team exited the warehouse and suited up with SCBA units to conduct the sampling.

Coliwasas were used to collect the samples. A new coliwasa was used for every drum. Twenty-four (24) of the 34 drums were sampled for RCRA ignitability. Pictures were taken of the 24 samples (see photos).

Sampling & Analysis

The Lab. Numbers of each sample taken, the Analyses Requested and the Lab. Results are:

Lab. Numbers:	Sampling Location:	Analyses:	Lab. Results:
204357	Warehouse drum 033	Ignitability (RCRA)	135°F K
204358	Warehouse drum 066	Ignitability (RCRA)	145°F L
204359	Warehouse drum 068	Ignitability (RCRA)	145°F L
204360	Warehouse drum 119	Ignitability (RCRA)	135°F K
. 204361	Warehouse drum 122	Ignitability (RCRA)	135°F K
204362	Warehouse drum 008	Ignitability (RCRA)	135°F K
204363	Warehouse drum 009	Ignitability (RCRA)	135°F K
204364	Warehouse drum 056	Ignitability (RCRA)	135°F K
204365	Warehouse drum 114	Ignitability (RCRA)	135°F K
204366	Warehouse drum 059	Ignitability (RCRA)	135°F K
204367	Warehouse drum 170	Ignitability (RCRA)	135°F K
204368	Warehouse drum 076	Ignitability (RCRA)	145°F L
204369	Warehouse drum 148	Ignitability (RCRA)	135°F K
204370	Warehouse drum 147	Ignitability (RCRA)	135°F K
204371	Warehouse drum 142	Ignitability (RCRA)	135°F K
204372	Warehouse drum 140	Ignitability (RCRA)	135°F K
204373	Warehouse drum 139	Ignitability (RCRA)	135°F K
204374	Warehouse drum 089	Ignitability (RCRA)	135°F K
204375	Warehouse drum 137	Ignitability (RCRA)	135 °F K
099617	Warehouse drum 104	Ignitability (RCRA)	135°F K
099618	Warehouse drum 135	Ignitability (RCRA)	135°F K
099619	Warehouse drum 132	Ignitability (RCRA)	135°F K
099620	Warehouse drum 235	Ignitability (RCRA)	135°F
099621	Warehouse drum 117	Ignitability (RCRA)	135°F K

^{*} Notes: K = Actual value known to be less than the value given

L = Actual value known to be greater than the value given

Results of Analyses

Any sample with a flash point less than 140°F (60°C) must be analysed for percent (%) water by weight. If the sample's flash point is less than 140°F and it contains less than 50% water by weight, it is considered a hazardous waste.

If the sample has greater than 50 % water by weight, there is a possibility that the sample may be a hazardous waste. To further determine the outcome, the sample must be analysed for % alcohol. If the sample meets all the characteristics and has an alcohol content greater than 24%, the sample is considered a hazardous waste.

Samples that are considered hazardous waste from these criteria are as follows:

Laboratory Number	Ignitability (°F, Lab. Results)	Water (% Weight)
204360	135°F	0.00
204361	135°F	0.45
204362	135°F	0.00
204363	135°F	0.10
204364	135°F	0.35
204365	135°F	0.24
204366	135°F	0.47
204367	135°F	0.92
204369	135°F	0.37
204370	135°F	0.00
204371	135°F	2.05
204372	135°F	0.23
204373	135°F	2.67
204374	135°F	0.38
204375	135°F	1.00
099617	135°F	1.35
099618	135°F	0.00
099619	135°F	1.69
099621	135°F	2.13

See the Lab Data Management System - Region II for results of all sampling analyses for Central Steel Drum, Newark, Essex County, NJ. Accompanying the results are the field data sheets, chain of custody, receipt of samples and analysis requests.

Findings & Conclusion

Based on the results from the sampling survey at Central Steels Drum, the facility is not meeting RCRA regulations.

Nineteen (19) of the 24 samples (Lab. Numbers 204360 thru 204367, 204369 thru 204375, 099617 thru 099619 and 099621) are hazardous waste. These samples have flash points of less than 140°F (60°C) and % water by weight of less than 50%.

Recommendation

Appropriate action to ensure RCRA regulations compliance is recommended.

CENTRAL STEEL DRUM:

Full 55-gallon drums containing a flammable organic liquid:

		0	.,
Drum #008		Drun	ı #142
#009	•		#147
#033			#148
#056			#150
#057			#170
#059			#235
#060			
#066			
#068			
#076			
#084			
#089			
#104			ų.
#112			
#114	•		
#117		•	•
#118			
#119			
#121	٠.	,	
#122			
#128			
#132			
#134			
#135			
#137	•		
#138			
#139			

#140

DATA NARRATIVE

3 0 JUL 1998

Project #683 Cental Steel Drum

Sample 204364 was a bi-phasic sample which consisted of a dark oil-like layer floating on top of a lower aqueous phase. The results reported for this sample are for the oil-like phase. The aqueous phase had a flash point of 145°F with an L remark code, the result of the paint filter test is 0 and the % water is 94.7.

JUL 2 9 1998

MONITORING & ASSESSMENT
BRANCH - MAB

LAB DATA MANAGEMENT SYSTEM - REGION I'I COMPLETED PROJECT APPROVAL

REPORT DATE 98/07/29

PROJECT NUMBER

PROJECT DATE

PROJECT NAME

683

97/11/25

CENTRAL STEEL DRUM

APPROVED JCR. Bowlon for K. Kubik
7-30-98

REPORT DATE: 98/07/29

COMPLETED ANALYSIS REPORT

PROJECT NAME: CENTRAL STEEL DRUM

EXPLANATIONS OF REMARK CODES

REMARK CODE	EXPLANATION
B :	RESULTS BASED UPON COLONY COUNTS OUTSIDE ACCEPTABLE RANGE
J	ESTIMATED VALUE
K	ACTUAL VALUE KNOWN TO BE LESS THAN VALUE GIVEN
L	ACTUAL VALUE KNOWN TO BE GREATER THAN VALUE GIVEN
N	NO OBSERVABLE EFFECT CONCENTRATION < 0.3%
0	SAMPLED BUT NOT ANALYZED DUE TO LAB ACCIDENT
T	REPORTED VALUE LESS THAN CRITERIA OF DETECTION
U	REPORTING LIMIT

QA/QC REMARK CODES

CODE	EXPLANATION
QD	ACCURACY CHECK SAMPLE ABOVE UPPER ACCEPTANCE LIMIT
QE	ACCURACY CHECK SAMPLE BELOW LOWER ACCEPTANCE LIMIT
QF	PRECISION OF CALIBRATION CURVE LESS THAN ACCEPTANCE CRITERIA
QJ	ESTIMATED DETECTION LIMIT DUE TO INTERFERENCE
QG	CONTINUING CALIBRATION CHECK DOES NOT MEET ACCEPTANCE CRITERIA
QS	SPIKE RECOVERIES ABOVE UPPER ACCEPTANCE LIMIT
QR	SPIKE RECOVERIES BELOW LOWER ACCEPTANCE LIMIT
QP	SAMPLE REPLICATE PRECISION DOES NOT MEET ACCEPTANCE CRITERIA
QH	RECOMMENDED HOLDING TIMES EXCEEDED
QT	TENTATIVELY IDENTIFIED COMPOUND
QM	PRESENCE OF MATERIAL VERIFIED BUT NOT QUANTIFIED
QB	BLANK CONTAMINATED BY ANALYTE IN EXCESS OF ACCEPTANCE CRITERIA
QQ	SAMPLE IMPROPERLY PRESERVED

LOCATION CODES FOR IDENTIFICATION OF SAMPLING POINTS AT INDUSTRIAL / SANITARY FACILITIES, LANDFILLS, HAZARDOUS WASTE SITES.

CODE NUMBERS	SAMPLING POINTS
1001 - 1050	EFFLUENT PIPE NUMBER 001 TO 050
1051 - 1099	OTHER EFFLUENTS SUCH AS COOLING TOWER DISCHARGE, DISCHARGE FROM HOLDING PONDS, ETC
1100 - 1249	IN PLANT SAMPLES
1435 - 1454	SEPARATE INFLUENT POINTS/WATER SOURCES
15XX	INFLUENT ASSOCIATED WITH EFFLUENT TOXX
2000	BLANK FOR VOLATILE ORGANICS
3000 - 3099	GROUND WATER FROM WELL 01 TO 99
3100 - 3199	SEDIMENT SAMPLE (WATER BOTTOM)
3200 - 3299	SOIL SAMPLE
3300 - 3399	STREAM WATER SAMPLE
3400 - 3499	LAGOON SAMPLE
3500 - 3599	STORAGE TANK SAMPLE
3600 - 3699	LEACHATE SAMPLE
3700 - 3799	OTHER TYPE SAMPLE



PROJECT NO: 683

099621 99999 LIQUID

99994 FLASH POINT, ASTM-D93

99999 WATER (% WEIGHT)

135 K

2.13

TOTAL

PROJECT NO: 683

STATION NO FROM

DATE

TO

OF

DAY

PROJECT NAME: CENTRAL STEEL DRUM

a de

LABNO PARNO PARAMETER NAME UNITS CHEMISTRY REMARK REMARK

NONE 97/11/25 1313
COMPOSITE 97/11/25 1320
DEPTH: 0000 SUBSTRATE: OTHER
DESCRIPTION: DRUM #104

NONE 97/11/25 1320 COMPOSITE 97/11/25 1327 DEPTH: 0000 SUBSTRATE: OTHER DESCRIPTION: DRUM #135

NONE 97/11/25 1327
COMPOSITE 97/11/25 1334
DEPTH: 0000 SUBSTRATE: OTHER
DESCRIPTION: DRUM #132

ü

NONE 97/11/25 1334 COMPOSITE 97/11/25 1341 DEPTH: 0000 SUBSTRATE: OTHER DESCRIPTION: DRUM #235

NONE 97/11/25 1341 COMPOSITE 97/11/25 1348 DEPTH: 0000 SUBSTRATE: OTHER DESCRIPTION: DRUM #117

			1	
	999 LIQUID 994 FLASH POINT, ASTM-D9 999 WATER (% WEIGHT)	3 DEG F	1=Y;0=N TOTAL	1 135 K 1.35
	999 LIQUID 994 FLASH POINT, ASTM-D9 999 WATER (% WEIGHT)	3 DEG F	1=Y;0=N TOTAL	0 135 K
099619 999 999 999	999 LIQUID 194 FLASH POINT, ASTM-D9 199 WATER (% WEIGHT)	3 DEG F	1=Y;0=N TOTAL	1 135 K 1.69
999	99 LIQUID 94 FLASH POINT, ASTM-D93 99 WATER (% WEIGHT) 99 ALCOHOLS (%VOL)	DEG F	1=Y;0=N TOTAL TOTAL	1 135 67.1 8.0 U

COMPLETED ANALYSIS REPORT

REPORT DATE: 98/07/29

PROJECT NO: 683 PROJECT NAME: CENTRAL STEEL DRUM DATE TIME STATION NO FROM **OF** TO DAY 10NE 97/11/25 1100 COMPOSITE 97/11/25 1107 EPTH: 0000 SUBSTRATE: OTHER ESCRIPTION: DRUM #033 IONE 97/11/25 1107 COMPOSITE 97/11/25 1114 EPTH: 0000 SUBSTRATE: OTHER ESCRIPTION: DRUM #066 97/11/25 1114 IONE COMPOSITE 97/11/25 1121 EPTH: 0000 SUBSTRATE: OTHER ESCRIPTION: DRUM #068 97/11/25 1121 COMPOSITE 97/11/25 1128 PEPTH: 0000 SUBSTRATE: OTHER ESCRIPTION: DRUM #119

97/11/25 1128 COMPOSITE 97/11/25 1135 PEPTH: 0000 SUBSTRATE: OTHER ESCRIPTION: DRUM #122

LABNO	PARNO	PARAMETER NAME	UNITS	CHEMISTRY		A/QC EMARK
	1: 4 1:				ı	
204357	99994	LIQUID FLASH POINT, ASTM-D93 WATER (% WEIGHT) ALCOHOLS (%VOL)	DEG F X X	1=Y;0=N TOTAL TOTAL	1 135 K 98.5 0.10	
204358		LIQUID FLASH POINT, ASTM-D93	DEG F	1=Y;0=N	1 145 L	
204359		LIQUID FLASH POINT, ASTM-D93	DEG IF	1=Y;Q=N	1 145 L	(g)*
204360	99994	LIQUID FLASH POINT, ASTM-D93 WATER (% WEIGHT)	DEG F	1=Y;O=N TOTAL	1 135 K 0	
	*		: : : ::::::::::::::::::::::::::::::::			
204361	99994	LIQUID FLASH POINT, ASTM-D93 WATER (% WEIGHT)	DEG F	1=Y;0=N	1 135 K 0.45	

REPORT DATE: 98/07/29

COMPLETED ANALYSIS REPORT

PROJECT NAME: CENTRAL STEEL DRUM

4

204366 99999 LIQUID

99994 FLASH POINT, ASTM-D93

99999 WATER (% WEIGHT)

	PRO	JECT	NO:	683
--	-----	------	-----	-----

STATION NO FROM OF TO DAY

NONE 97/11/25 1135 COMPOSITE 97/11/25 1142 DEPTH: 0000 SUBSTRATE: OTHER DESCRIPTION: DRUM #008

NONE 97/11/25 1142 COMPOSITE 97/11/25 1149 DEPTH: 0000 SUBSTRATE: OTHER DESCRIPTION: DRUM #009

NONE 97/11/25 1149 COMPOSITE 97/11/25 1156 DEPTH: 0000 SUBSTRATE: OTHER DESCRIPTION: DRUM #056

ü

NONE 97/11/25 1156 COMPOSITE 97/11/25 1203 DEPTH: 0000 SUBSTRATE: OTHER DESCRIPTION: DRUM #114

NONE 97/11/25 1203 COMPOSITE 97/11/25 1210 DEPTH: 0000 SUBSTRATE: OTHER DESCRIPTION: DRUM #059

	LABNO	PARNO	PARAMETER NAME	UNITS	CHEMISTRY	VALUE & QA/QC REMARK REMARK
	20/7/2		: .	Ť.		
- ALLEN AND AND AND AND AND AND AND AND AND AN	204362	99994	LIQUID FLASH POINT, ASTM-D93 WATER (% WEIGHT)	DEG %	1=Y;0=N F Total	1 135 K 0
	204363	99994	LIQUID FLASH POINT, ASTM-D93 WATER (% WEIGHT)	DEG X	1=Y;O=N F TOTAL	1 135 K 0.1
	204364	99994	LIQUID FLASH POINT, ASTM-D93 WATER (% WEIGHT)	DEG X	1=Y;0=N F TOTAL	0 135 K 0.35
	204365	99994	LIQUID FLASH POINT, ASTM-D93 WATER (% WEIGHT)	DEG	1=Y;0=N F TOTAL	1 135 K 0.24

1=Y; 0=N

TOTAL

DEG F

135 K

0.47

COMPLETED ANALYSIS REPORT

PROJECT NO: 683

NONE 97/11/25 1210 COMPOSITE 97/11/25 1217 SEPTH: 0000 SUBSTRATE: OTHER DESCRIPTION: DRUM #170

COMPOSITE 97/11/25 1224 DEPTH: 0000 SUBSTRATE: OTHER DESCRIPTION: DRUM #076

NONE 97/11/25 1224 COMPOSITE 97/11/25 1231

DEPTH: 0000 SUBSTRATE: OTHER DESCRIPTION: DRUM #148

COMPOSITE 97/11/25 1238 DEPTH: 0000 SUBSTRATE: OTHER DESCRIPTION: DRUM #147

COMPOSITE 97/11/25 1245 DEPTH: 0000 SUBSTRATE: OTHER DESCRIPTION: DRUM #142

STATION NO

NONE

NONE

DATE

FROM

TO

97/11/25 1217

97/11/25 1231

97/11/25 1238

TIME

OF

DAY

REPORT DATE: 98/07/29

PROJECT		

LABNO	PARNO	PARAMETER NAME	UNITS	CHEMISTRY	VALUE & QA/ REMARK REM	'QC IARK
201747	3	LIQUID		4 11 4 11		
 :204367		FEASH POINT, ASTM-D93 WATER (% WEIGHT)	DEG F	1=Y;0=N TOTAL	135 K 0.92	
204368		LIQUID FLASH POINT, ASTM-D93	DEG F	1=Y;0=N	1 145 L	
204369	99994	LIQUID FLASH POINT, ASTM-D93 WATER (% WEIGHT)	DEG F	1=Y;0=N Total	1 135 K 0.37	
204370	99994	LIQUID FLASH POINT, ASTM-D93 WATER (% WEIGHT)	DEG F	1=Y;0=N TOTAL	135 K	
204371	99994	LIQUID FLASH POINT, ASTM-D93 WATER (% WEIGHT)	DEG F	1=Y;Q=N TOTAL	0 135 K 2.05	

QA/QC

REMARK

REPORT DATE: 98/07/29

PROJECT	NO:	683
---------	-----	-----

PROJECT NAME: CENTRAL STEEL DRUM

DATE TIME STATION NO OF FROM TO DAY

LABNO PARNO PARAMETER NAME

VALUE & REMARK UNITS CHEMISTRY

NONE 97/11/25 1245 COMPOSITE 97/11/25 1252 DEPTH: 0000 SUBSTRATE: OTHER DESCRIPTION: DRUM #140

97/11/25 1252 COMPOSITE 97/11/25 1259 DEPTH: 0000 SUBSTRATE: OTHER

DESCRIPTION: DRUM #139

NONE

97/11/25 NONE 1259 COMPOSITE 97/11/25 1306 DEPTH: 0000 SUBSTRATE: OTHER DESCRIPTION: DRUM #089

97/11/25 1306 COMPOSITE 97/11/25 1313 DEPTH: 0000 SUBSTRATE: OTHER DESCRIPTION: DRUM #137

204372 99999 LIQUID 1=Y:0=N 99994 FLASH POINT, ASTM-D93 135 K 99999 WATER (% WEIGHT) % TOTAL 0.23

204373 99999 LIQUID 1=Y; 0=N 99994 FLASH POINT, ASTM-D93 DEG F 135 K 99999 WATER (% WEIGHT) TOTAL 2.67

204374 99999 LIQUID 1=Y:0=N 1 99994 FLASH POINT, ASTM-D93 DEG F 135 K 99999 WATER (% WEIGHT) TOTAL 0.38

204375 99999 LIQUID 1=Y:0=N 1 99994 FLASH POINT, ASTM-D93 DEG F 135 K 99999 WATER (% WEIGHT) TOTAL . 1.0

**** END OF PROJECT ****

Photo #01: Drum 033: Lab. No. 204357

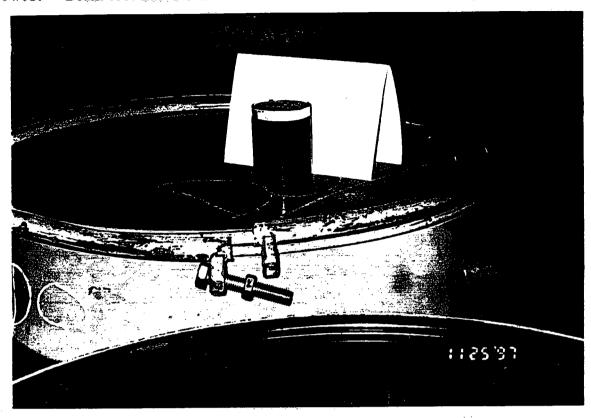


Photo #02: Drum 066: Lab No. 204358

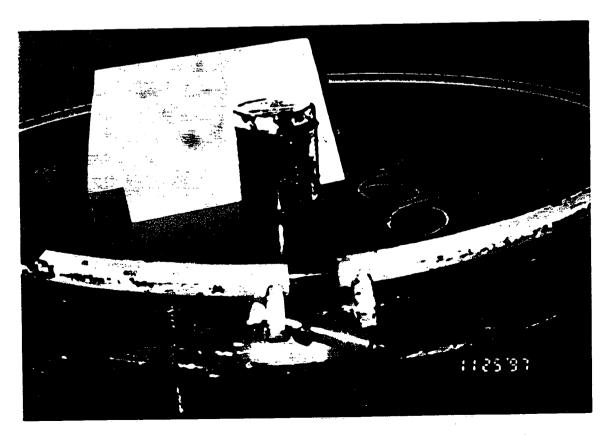


Photo #03: Drum 068: Lab. No. 204359



Photo #04: Drum 119: Lab No. 204360

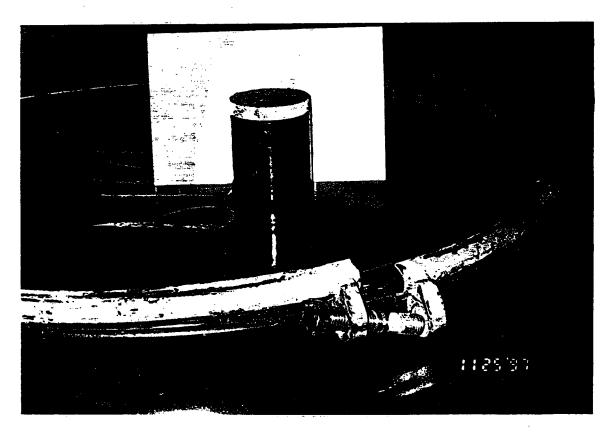


Photo #05: Drum 122: Lab. No. 204361

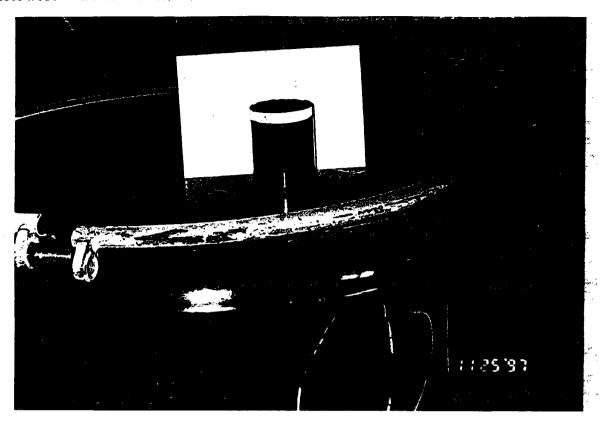


Photo #06: Drum 008: Lab No. 204362



Photo #07: Drum 009: Lab. No. 204363

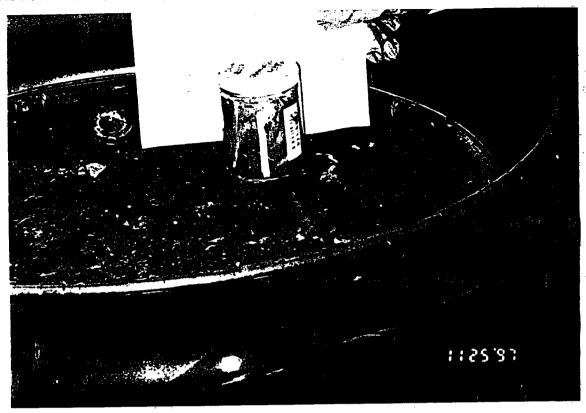


Photo #08: Drum 056: Lab No. 204364

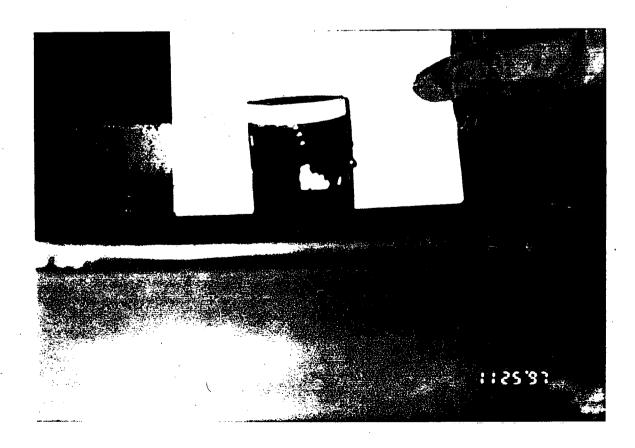


Photo #09: Drum 114: Lab. No. 204365

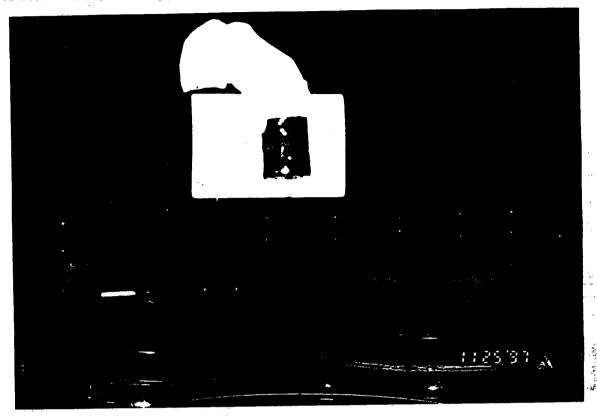


Photo #10: Drum 059: Lab No. 204366

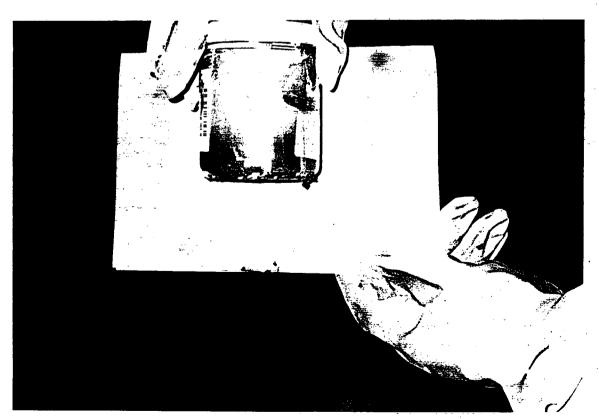


Photo #11: Drum 170: Lab. No. 204367

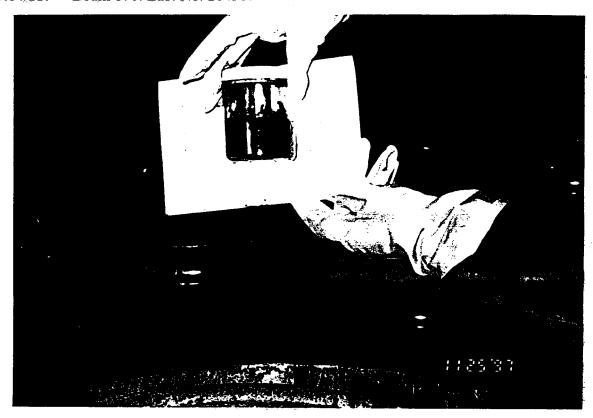


Photo #12: Drum 076: Lab No. 204368

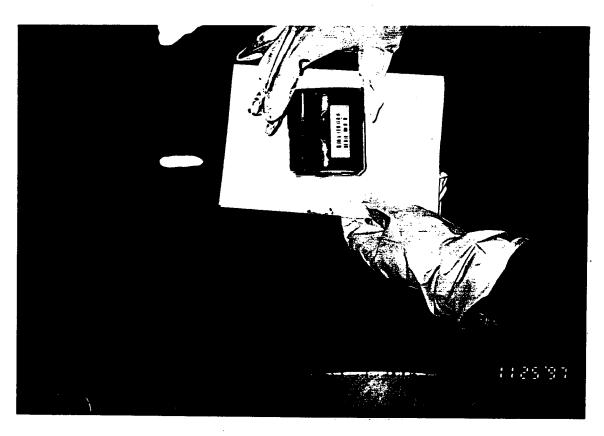


Photo #13: Drum 148: Lab. No. 204369

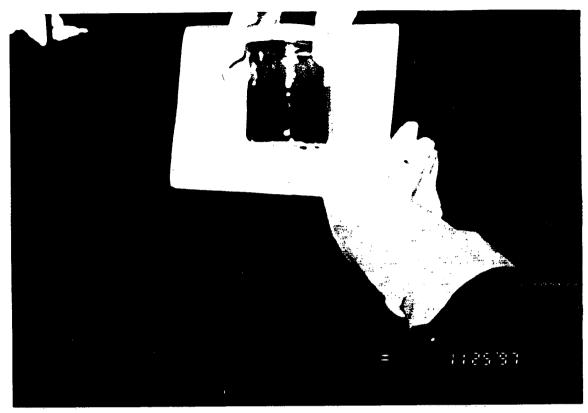


Photo #14: Drum 147: Lab No. 204370

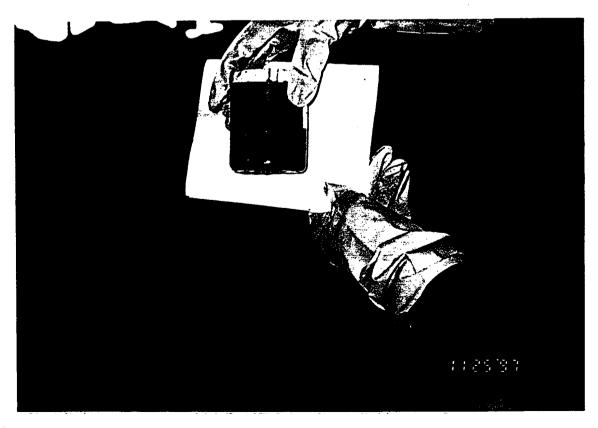


Photo #15: Drum 142: Lab. No. 204371

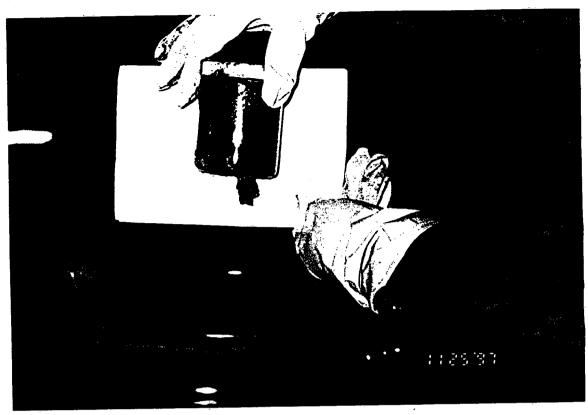


Photo #16: Drum 140: Lab No. 204372



Photo #17: Drum 139: Lab. No. 204373

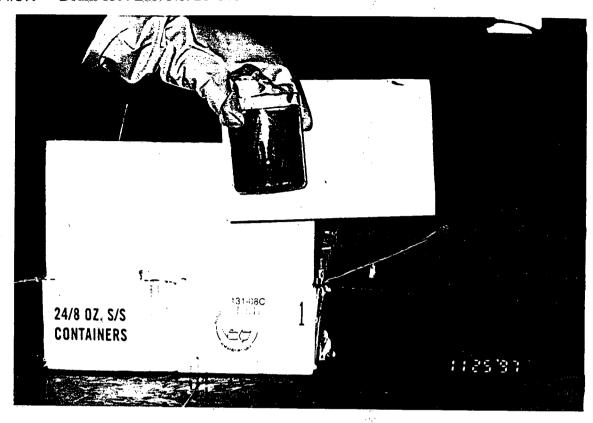


Photo #18: Drum 089: Lab No. 204374

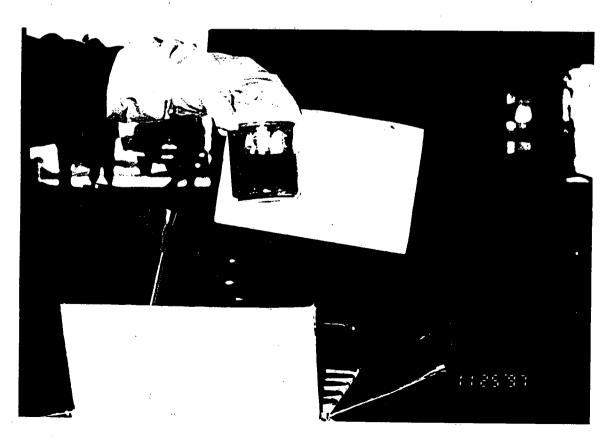


Photo #19: Drum 137: Lab. No. 204375

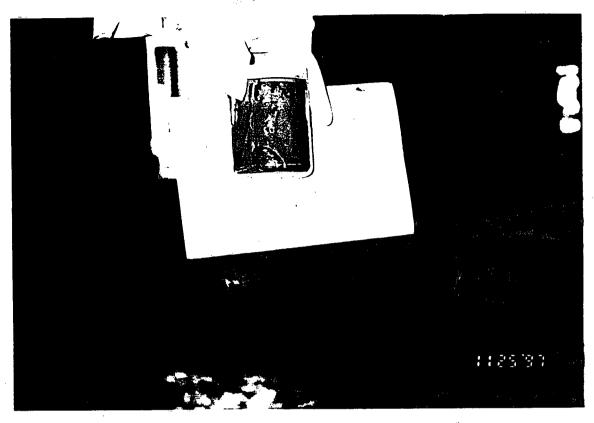


Photo #20: Drum 104: Lab No. 099617

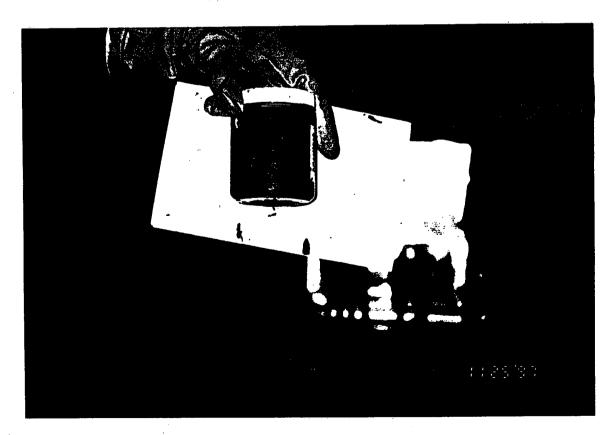


Photo #21: Drum 135: Lab. No. 099618

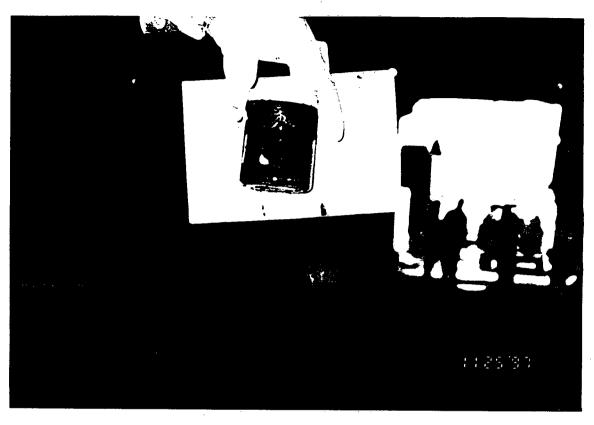


Photo #22: Drum 132: Lab No. 099619

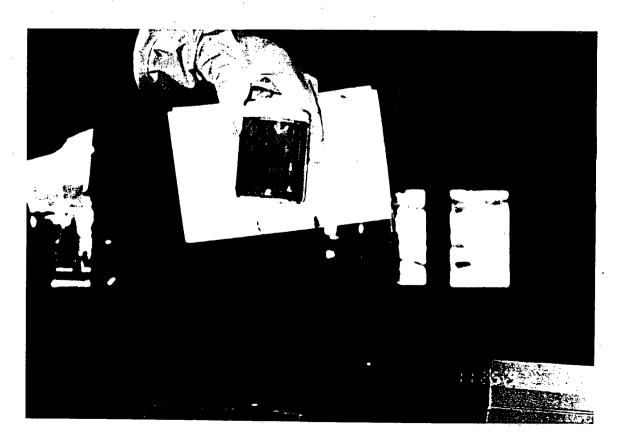


Photo #23: Drum 235: Lab. No. 099620

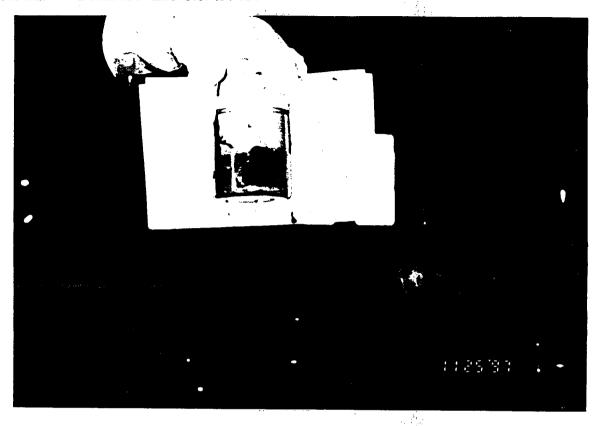


Photo #24: Drum 117: Lab No. 099621



					
	Project Name	LNTRAL STEE		4	Samples to:
	Collector(s) TRAN)/DUGAN	Affiliation	USEPA	Bact Bio Cherry Other
•	SAMPLING METHO	D (Circle)	LDMS CODE	0	Station No.
	Kemmerer D	redge Ponar (Manual)		1/	Station No.
	Niskin Net	Seine Trawi Bucket	DATA BASE	CODE	
	Trowel Crear	n Dipper	STA. TYPE C	one F	
	Automatic	· ·	017,11720	ODE - III - II - II - II - II	Sample Depth (Ft.)/Fac. Loc. Code
	OtherC	OL IWASA			
	·				
	SUBSTRATE TYPE (Circle) Aqueous S	Sediment Slud	ge Oil Biological	Lab Number
•				-	- Cab Nomber
• .		Solvent	tract Other	PAINT	204357
- : :	BOD — Seed Suppl	ied 🗆 Yes 🗆 No	Source:		
		Preparation (Circle)		Source Type (Circle)	Type of Sample
• .	Container	Cleaning Procedure	Landfill	Industrial	Grab Composite
(Glass Jar	Detergent Wash	Leachate	Effluent	Time Space
	Plastic Jar	Water Rinse	Drum	Process Stream	
	Metal	Acid Rinse	Test Well		Collection (Ending) Date
	POA Vial	Solvent Rinse:	Depth:	Holding Pond Drum	Yr Mo Day
	Cubitainer	Acetone	Other:	_ Waste Pile	
	Acetate Core	Hexane	Other.	_ Municipal Treatment	Ending Time (24 Hr)
	Paper Cap	Methylene Chloride	Storogo Tonk		-
	Tefion Cap	Other (Specify):	Storage Tank Top	Influent	11/07
; *	Foil Cap	Otter (Specify).	Middle	Effluent-CI Effluent-Non CI	Backerta Bake
	Other	,			Beginning Date
	Other		Bottom	Sludge	9 77 Mo Day
	Preservation	ESS	Truck	Ambient	
	Acid	المساقي كا	Drum	Lake	
	Solvent	Charac	Tank	Stream	Beginning Time (24 Hr)
	Chemical	1 Y	Other	_ Pond	11100
	Wet Ice	· •	101-21-2	_ Ocean	
	· · · · ·		Weils	Estuary	pH
	Dry Ice Ambient	.	Monitoring		
	Other		Production		
	Other		Drinking		Sample Temp. (°C)
			Private		Jampie Temp. (10)
	Sample Location De	scription:			
			4	1. 12 医多种性 1. 12 15 15 15 15 15 15 15 15 15 15 15 15 15	
		DRUM	4 <i>033</i> -		DO (mg/l)
¥.					
					Cond. (uMHOS/CM)
d . :					
<u> </u>					Salinity(%)
	Remarks:				
		0		LACCO	
	1-801	glass jar	- 1 ane	Tabelity.	
	1. 00 3.	1000			Sample Split
	<i>D</i> .				☐ Yes X No
$\tilde{x}: \mathcal{A}$		the state of			
					If Yes With Whom?
·			ស្រ្តាស់ ស្រ្តាស់ មិនសា		Receipt
			75 25.1 11.00 mm - 11.00 pt 25.1		

				<u> </u>	
	Project Name	TRAL STEEL DA	1/27		Samples to:
	Collector(s) TRAN	/ Dugan	Affiliation USE	PA :	Bact Bio Chem Other
<u> </u>			- 1		
	SAMPLING METHO	`	LDMS CODE		Station No.
	Kemmerer Di	- .	DATA BASE (CODE	
	Niskln Net	Seine Trawi Bucket		•	
		n Dipper	STA. TYPE CO	DDE	Sample Depth (Ft.)/Fac. Loc. Code
	Automatic Other <u>Colli</u>	WASA			Campie Deptii (1 1.//1 ac. 200. 00de
	Other		<u> </u>		
	SUBSTRATE TYPE (Circle) Aqueous S	ediment Sludg	je Oil Biological	Lab Number
•				·	Lab Number
		Solvent Ex	tract Other (PAINT	204358
	BOD — Seed Suppli	ed 🗆 Yes 🗆 No	Source:		-
		Preparation (Circle)		Source Type (Circle)	Type of Sample Grab Composite
	Container	Cleaning Procedure	Landfill	Industrial	Time Space
	Giass Jap	Detergent Wash	Leachate	Effluent	Time opace
	Plastic Jar	Water Rinse	Drum	Process Stream	Collection (Ending) Date
	Metal	Acid Rinse	Test Well	Holding Pond	Vr Mo Day
	POA Vial	Solvent Rinse:	Depth:	Drum	1 9 7 1 1 2 15
	Cubitainer	Acetone	Other:	Waste Pile	· ·
	Acetate Core	Hexane		_ Municipal Treatment	Ending Time (24 Hr)
•	Paper Cap	Methylene Chloride	Storage Tank	Influent	11/1/1/1/1
	Teflon Cap	Other (Specify):	Тор	Effluent-Cl	
	Foil Cap	6.5.5 glassware	Middle	Effluent-Non Cl	Beginning Date
	Other	6.5.3	Bottom	Sludge	9 17 Mo Day-
,	Preservation	9/nsswitt	Truck	Ambient	
	Acid	/ .	Drum Tank	Lake Stream	Bosioning Time (04 112
	Solvent		Other	Pond	Beginning Time (24 Hr)
	Chemical		Ottror	Ocean	/ / 0 7
	Wet Ice	:	Wells	Estuary	
	Dry ice		Monitoring	 /	pH
	Ambient	•	Production	•	
	Other		Drinking		
	· · · · · · · · · · · · · · · · · · ·		Private		Sample Temp. (°C)
	Sample Location De	scription:			
	The server	Drum # 066			
					DO (mg/l)
-					
٠.			egit des		Cond. (uMHOS/CM)
				•	Salinity(% _o)
	Remarks:	سندر ورسي			
	1-802 TAR	ignitibility	: ::: : ::: : : : : : : : : : : : : :		
					Sample Split
					☐ Yes ☐ No
					If Yes With Whom?
				and the second s	Receipt □ Yes □ No
					1 169 7 100
		41			

	Danie at N	CENTRAL ST	CEL MAIL	И	
•	Project Name	1 / 3 / 6 i		EPA	Samples to: Bact Bio Chep Other
			minianyn		Bact Blo Chep Other
	SAMPLING METHOL		LDMS CODE		Station No.
	Kemmerer Dr Niskin Net	redge Ponar Manual Seine Trawi Bucket	DATA BASE O	CODE H	
	Trowel Crean	· ·			
-	A		STA. TYPE CO)DE	Sample Depth (Ft.)/Fac. Loc. Code
	Other	COLIWASA			
	SUBSTRATE TYPE (Circle) Aqueous	Sediment Sludg	ge Oil Biological	Lab Number
		Solvent	tract Other	PAINT)	204359
•	BOD — Seed Suppli	ed 🗆 Yes 🗆 No	Source:		
		reparation (Circle)		Source Type (Circle)	Type of Sample Grab Composite
	Container	Cleaning Procedure	Landfill	Industrial	Time Space
. (Glass Jar	Detergent Wash	Leachate .	Effluent	-
	Plastic Jar	Water Rinse	Drum	Process Stream	Collection (Ending) Date
	Metal	Acid Rinse	Test Well	Holding Pond	Gra Mo. Day
	POA Vial	Solvent Rinse:	Depth:	Drum	1[1/]/]/23
	Cubitainer Acetate Core	Acetone	Other:	Waste Pile	Ending Time (24 Hr)
	Paper Cap	Hexane Methylene Chloride	Storage Tank	Municipal Treatment Influent	-
	Teflon Cap	Other (Specify):	Top	Effluent-Cl	/ / 2 /
			Middle	Effluent-Non Cl	Beginning Date
	Other	ESS glorasa	Bottom	Sludge	9 17 , Mo , 2 Day-
		ESSUSE	Truck	Ambient	1/1/1/25
	Preservation	a live Mille	Drum /	Lake	
•	Acid	9/	Tank	Stream	Beginning Time (24 Hr)
	Solvent		Other	Pond	11/1/1/14
	Wet Ice	-	Wells	_ Ocean Estuary	
	Dry Ice		Monitoring		pH
	Ambient	•	Production		
	Other		Drinking		
	<u> </u>		Private	to the May State of the State o	Sample Temp. (°C)
	Sample Location De	scription:			
1,15	The second second				DO (mell)
e en jedan S		Double	# 068		DO (mg/i)
		DKUM	. 000	And the state of	
1 th 1			Agricological Section		Cond. (uMHOS/CM)
		Parties			
		*	<u>. The species of the second o</u>		Salinity(%,)
	Remarks:	-	**	4	
	, 0	6	/	0.0L.	
1940r -	1-85	glass 190-	ghite	avry.	Sample Split
·	$\boldsymbol{\delta}$	gluss jar-			□ Yes ZX No
in a second			ta the state of th		the search of th
*** . **.			• • • • • • • • • • • • • • • • • • • •	ng sa Sanggan Sanggan Sanggan Sanggan	If Yes With Whom?
iet V				禁止机构的	Receipt ☐ Yes ☐ No
•	•	1			

	Project Name	JAN/ STEE! I	nom		Samples to:
	Collector(s)	N/DUGAN	Affiliation USE	PA	Bact Bio Chem Other
	· 	 	1		
	SÄMPLING METHO	The state of the s	LDMS CODE		Station No.
	Kemmerer Di	redge Ponar Manual	•		Station No.
	Niskin Net	Seine Trawl Bucket	DATA BASE C	ODE	
	Trowel Crear	n Dipper	STA. TYPE CO	DE	
	Automatic	•			Sample Depth (Ft.)/Fac. Loc. Code
	Other Coliz	UNSA			
	SUBSTRATE TYPE (Circle) Aqueous S	ediment Sludg	e Oil Biological	Lab Number
•		Solvent Ex	tract Other 02	DAINT	
,		CONTAIN EX	tract Other D		204360
	BOD — Seed Suppl	led 🗆 Yes 🗆 No	Source:		
		Preparation (Circle)		ource Type (Circle)	Type of Sample Grab Composite
	Container	Cleaning Procedure	Landfill.	Industrial	Time Space
. (Glass Jar	Detergent Wash	Leachate	Effluent	I Ime Space
• ,	Plastic Jar	Water Rinse	Drum	Process Stream	
	Metal	Acid Rinse	Test Well	Holding Pond	Collection (Ending) Date
• •	POA Vial	Solvent Rinse:	Depth:	Drum	917 /1/213
;	Cubitainer	Acetone	Other:	Waste Pile	
	Acetate Core	Hexane		Municipal Treatment	Ending Time (24 Hr)
,	Paper Cap	Methylene Chloride	Storage Tank	Influent	1.1.2
	Tefion Cap	Other (Specify):	Top	Effluent-Cl	11/28
٠.	Foil Cap	Cuici (openity):	Middle	Effluent-Non Cl	Beginning Date
	Other		Bottom	Sludge	
•	Othor		Truck	Ambient	9 r 7 1 Mo 2 Day -
•	Preservation	65.5	Drum		
	Acid	glasswane	Tank	Lake	
	Solvent	'	1	Stream	Beginning Time (24 Hr)
	Chemical		Other	Pond	111121
	Wet Ice		144-11-	Ocean	
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Wells	Estuary	pH
. •	Dry Ice		Monitoring		
	Ambient		Production		
٠,	Other		Drinking		Sample Temp. (°C)
. e .			Private	the property of the property	Campie (emp. (*C)
	Sample Location De	scription:			
		m # 119		Part of the research of	The second secon
	Vno				DO (mg/l)
					Cond. (uMHOS/CM)
			the first		· 医复数医多数医
					Salinity(%)
	Remarks:			The state of the s	
		سيرل سيد			
1	-802 TAR:	ignitality	the realizable of the control of the		The second secon
	The state of the s				Sample Split
. :					☐ Yes ☑ No
					If Yes With Whom?
		andre de la companya de la companya Pengganangan de la companya de la c			Receipt
					THE STATE OF THE S
	v.				The state of the s

				· · · · · · · · · · · · · · · · · · ·
	CENTRAL S			Samples to:
Collector(s) TRA	N/ DUEAN	Affiliation	SEPA	Bact Bio Chem Other
	7		0	
SAMPLING METHO	and the second second	LDMS CODE		Station No.
	redge Ponar Manual	DATA BASE	-ODE //	
	Seine Trawl Bucket	DATA BASE	, OUE	
· ·	m Dipper	STA. TYPE CO	DĎĘ	Sample Depth (Ft.)/Fac. Loc. Code
Automatic	CCLIWASA			Sample Deptil (Ft.)/Fac. Loc. Code
Other				
SUBSTRATE TYPE (Circle) Aqueous	Sediment Sludg	ge Oil Biological	
0000111111211121				Lab Number
	Solvent E	ctract Other	PAINT 1	204361
BOD — Seed Suppl	led ☐ Yes ☐ No	Source:		
· · · · · · · · · · · · · · · · · · ·	Preparation (Circle)		Source Type (Circle)	Type of Sample Grab Composite
Container	Cleaning Procedure	Landfill	Îndustrial	Time Space
Glass Jar	Detergent Wash	Leachate	Effluent	V Time Opace
Plastic Jar	Water Rinse	Drum	Process Stream	Collection (Sedice) Date
Metal	Acid Rinse	Test Well	Holding Pond	Collection (Ending) Date
POA Vial	Solvent Rinse:	Depth:	Drum	1 9"7 My 2 Day
Cubitainer	Acetone	Other:	Waste Pile	
Acetate Core	Hexane		Municipal Treatment	Ending Time (24 Hr)
Paper Cap	Methylene Chloride	Storage Tank	Influent	1135
Teflon Cap	Other (Specify):	Тор	Effluent-CI	
Foil Cap		Middle	Effluent-Non Cl	Beginning Date
Other	1	Bottom	Sludge	917 Mo Day 2 15
	E5S glasserare	Truck	Ambient	
Preservation	2 milane	Drum	Lake	_ :
Acid Solvent	alas	Tank	Stream	Beginning Time (24 Hr)
Chemical	1 1	Other	_ Pond _ Ocean	2 8
Wet Ice		Wells	Estuary	
Dry ice		Monitoring	Estuary	pH
Ambient	•	Production		
Other		Drinking		
		Private		Sample Temp. (°C)
Sample Location De	escription:	in the second constitution	The second of th	
Contract to the second				
				DO (mg/l)
	DRUM #	127		
	DRUIT	144		
		The state of the state of		Cond. (uMHOS/CM)
A STATE OF THE STA				Salinity(%,)
Remarks:				
The first of the second of the	<i>D</i>	1.	1 6.1.1	
1-20	. glass ja	1- lan	tabulity.	Sample Split
		X		
				☐ Yes 🔏 No
				If Yes With Whom?
				Receipt

	Project Name	ENTRAL STEEL	Drum		Samples to:			
	Collector(s)	n/ Digan	Affiliation US &	-PA	. Bact Bio	Chem	Other	
	SAMPLING METHO		LDMS CODE		Station No.			
		redge Ponar Manual	DATA BASE	CODE				
	Niskin Net	Seine Trawl Bucket	ļ.	*				[
		n Dipper	STA. TYPE C	ODE	Sample Depth (Et V/Esc. Lo.	c Code	
	Automatic				Sample Debut (3. OOG 0	
	Other Coli	WASH		•	-			
• ,	SUBSTRATE TYPE (<u></u>	Sediment Slud		Lab Number		-	
			ctract Other (Print)	204	362		
	BOD — Seed Suppl		Source:		Type of Sample		$\frac{1}{\sqrt{1}} \frac{1}{\sqrt{1}} \frac{1}{\sqrt{1}$	
•	Sample F	Preparation (Circle)		Source Type (Circle)	Grab (Composite		. •
	Container	Cleaning Procedure	Landfill	Industrial		me Space		٠.
٠,	Glass Jar	Detergent Wash	Leachate	Effluent			_}	
	Plastic Jar	Water Rinse	Drum	Process Stream	Collection (End	ng) Date		
	Metal	Acid Rinse	Test Well	Holding Pond	· · · · · · · · · · · · · · · · · · ·		1	
	POA Vial	Solvent Rinse:	Depth:	Drum	917 1 MO	213		
	Cubitainer	Acetone	Other:	Waste Pile				
	Acetate Core	Hexane		_ Municipal Treatment	Ending Time (24	Hr)	3	
	Paper Cap	Methylene Chloride	Storage Tank	Influent	1142	4		
	Teflon Cap	Other (Specify):	Тор	Effluent-CI		ار در این الید		
	Föil Cap	100	Middle	Effluent-Non Cl	Beginning Date			
	Other	6.S. S Glassware	Bottom	Sludge	917 1 Mo	Day	1	
		ChecWARE	Truck	Ambient	977	125]	
	Preservation] /****	Drum	Lake				
• .	Acid	·	Tank	Stream	Beginning Time	(24 Hr)		
	Solvent	,	Other	Pond	112	了		
	Chemical			Ocean	1/13			
	Wet Ice		Wells	Estuary	рН			
	Dry Ice		Monitoring	7		7		
	Ambient	•	Production					
	Other		Drinking					
	. <u> </u>		Private		Sample Temp. (<u>'C)</u>		
	Sample Location De	escription:						
	Drum	# 001			DO (ma/l)			٠.
					DO (mg/l)	–	3 . *	. '
٠					Cond. (uMHOS/	CM)		
		· · · · · · · · · · · · · · · · · · ·					1	
<u> </u>		***	Later to the second	The transfer of the second	Salinity(% _e)		and the second	
•7	Remarks:							
1-	SOE JAR :	19~: TTE, 1.Ty	The second secon		Sample Split			
• • •	— , ▼ ,				□ Yes	ſ No		
					If Yes With Who			
					II TOS WITH WAY	JIII (
					Receipt	Yes 🔲	No	
. •	•	,						

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey ENVIRONMENTAL SERVICES DIVISION

		X			
	771	CENTRAL STE		AS EPA	Samples to:
	Collector(s) //e/	THE PARTY	Affiliation	45 2111	Bact Bio Chem Other
•	SAMPLING METHOD	O (Circle)	LDMS CODE	<u>U</u>	Station No.
		redge Ponar Manual	DATA BASE C	ODE H	
•	Niskin Net Trowel Crean	Seine Trawl Bucket		F .	
	Automatic		STA. TYPE CO	DDE	Sample Depth (Ft.)/Fac. Loc. Code
	Other	COLIWHSA		. •	
			<u> </u>		
•	SUBSTRATE TYPE (Circle) Aqueous S	ediment Sludg		Lab Number
:		Solvent	tract Other	PAINT)	204363
	BOD — Seed Suppli	ed 🗆 Yes 🗆 No	Source:		\
		Preparation (Circle)		ource Type (Circle)	Type of Sample Grab Composite
	Container	Cleaning Procedure	Landfill	Industrial	Time Space
· · · · (Glass Jar	Detergent Wash	Leachate	Effluent	
	Plastic Jar Metal	Water Rinse Acid Rinse	Drum Test Well	Process Stream Holding Pond	Collection (Ending) Date
	POA Vial	Solvent Rinse:	Depth:	Drum Pond	9Yr 7 Mo, Day
	Cubitainer	Acetone	Other:	Waste Pile	11/11/14/2
	Acetate Core	Hexane		Municipal Treatment	Ending Time (24 Hr)
ing d	Paper Cap	Methylene Chloride	Storage Tank	Influent	/ / 4 9
	Teflon Cap Foll Cap	Other (Specify):	Top Middle	Effluent-Cl Effluent-Non Cl	Beginning Date
	Other		Bottom	Sludge	
•		ESS	Truck	Ambient	917 MO 2 Day-
-	Preservation	المستعمران سا	Drum	Lake	
,	Acid	1 qu	Tank	Stream	Beginning Time (24 Hr)
	Chemical	1	Other	_ Ocean	1 1 4 2
	Wet Ice		Wells	Estuary	pH
٠	Dry Ice		Monitoring		
	Ambient	· .	Production		
	Other		Drinking Private		Sample Temp. (°C)
	Sample Location De	scription:	Titvato .		
		DRUH #	nna	en de la companie de La companie de la co	DO (mg/l)
		DRUM "	007		
					Cood (vMHOe/CM)
200					Cond. (uMHOS/CM)
2 mg 14				A Section 1	Salinity(%,)
	Remarks:				
			47	1.0	
	1-0-	glan jar-	. /a.i.t	ability.	Sample Split
	1 803	. ques po	igian		☐ Yes ☑ No
	0	I U			If Yes With Whom?
	en e				图像第4次等例的主要有1000
					Receipt

Form: FTB RPD-11-82-2

Project Name CENTRAL STEEL DRUM Collector(s) TRAN / Dugan Affiliation US EPA Affiliation US EPA				Samples	Samples to:			
Collector(s)	J Dugan	Affiliation 25	5 PA	Bact	Bio	Chem	Other]
SAMPLING METHOL) (Circle)	LDMS CODE		7	<u> </u>		<u> </u>	L
Kemmerer Dr	edge Ponar Manual		the control of the second	Station	Vo.			
* * * * * * * * * * * * * * * * * * * *	Seine Trawi Bucket	DATA BASE C	XODE					
Trowel Crean	n Dipper	STA TYPE CO	DDE	144				ㅗ
Automatic,				Sample	Depth (Ft	.)/Fac. Lo	c. Code	191
Other Colic	UASA							
SUBSTRATE TYPE (Circle) Aqueous	Sediment Sludo	je Oil Biological	Lab Nun	her			
		ktract Other		1	نسد نفر سر	<u> </u>		
					043	54		
	ed			1	Sample			
	reparation (Circle) Cleaning Procedure	Landfill	Source Type (Circle)	Grab		mposite	7	
Container Glass-dar	Detergent Wash	Leachate	Effluent	41 /	Tim	e Space		
Plastic Jar	Water Rinse	Drum	Process Stream				ا	
Metal .	Acid Rinse	Test Well	Holding Pond	Collection	n (Endin		· .	
POA Vial	Solvent Rinse:	Depth:	Drum	917	Mo	Day		• •
Cubitainer	Acetone	Other:	Waste Pile		1 1	b. I	•	_
Acetate Core	Hexane	1	Municipal Treatment	Ending 1	ime (24 t	(r)	*	1777
Paper Cap	Methylene Chloride	Storage Tank	Influent	7 7 7	56	1 .		
Tefion Cap	Other (Specify):	Тор	Effluent-Cl] .		• .
Foil Cap	-10	Middle	Effluent-Non Cl	Beginnir				. '
Other	ES.S glass want	Bottom	Sludge	9 17	Mo	2Day		
	9/nss white	Truck	Ambient		<u> </u>	12 -	}	
Preservation	· 图像 2000 多數	Drum	Lake				¥	
Acid		Tank	Stream	Beginnir	g Time (2	24 Hr)		
Solvent		Other	_ Pond	11/1/	4 9			
Wet Ice		Wells	Ocean			<u> </u>	1	
Dry Ice		Monitoring	Estuary	pH	· · · · ·		• • • • •	
Ambient		Production			1			14.
Other		Drinking				j		
		Private		Sample	Femp. (°C)		
Sample Location De	scription:			11 1		X 3		
Daum	# 056			DO (mot	<u> </u>	j	e e e e	
ా కొన్నాళ్ళుకు మారాజు				DO (mg/l		ì	1 - 1.	i.
2						}		
			•	Cond. (u	MHOS/CA	a)	.*	
					1	ÍΠ		
					Ц	<u>L</u>		
Remarks:				Salinity(% _e)	i di dan da	هجيوا والمتأبيرات	rt læ
								
1.802 JAR:	19 NITI GILTY			Sample :	Solit	٠. ر		
▼								
				0,	res 🖸	No	٠. ٠.	
				If Yes W	th Whom	?		
							la.	
•				Receipt	□ Ye	s 🔲 1	40 ·	
		•	the state of the s	1	14			• •

Form: FTB RPD-11-82-2

		*			·	
		CENTRAL, STE	EL DRU	(H	Samples to:	
	Collector(s) TRA	N/ DUEAN ,	Affiliation US	EPA	Bact Bio Chem	Other
<u> </u>						Other
	SAMPLING METHO	D (Circle)	LDMS CODE	0	Otables No.	
	Kemmerer Di	redge Ponar Manual		14	Station No.	
	Niskin Net	Seine Trawi Bucket	DATA BASE C	ODE		
	Trowel Cream		STA. TYPE CO	NOT F		
	Automatic		SIA. ITPE CC	, DE	Sample Depth (Ft.)/Fac. L	oc. Code
	Other	COLIWASA				
	Other					
	SUBSTRATE TYPE (Cirolo) Aguagua C	ediment Sludg	a Oil Biological		
	SUBSTRATE TIPE (Circle) Aqueous S			Lab Number	
		Solvent Ex	tract Other	PAINT,	304905	7.
				7 1110	294365	
	BOD — Seed Suppli	ed 🗆 Yes 🗆 No	Source:		Type of Sample	
	Sample F	Preparation (Circle)	Sample S	ource Type (Circle)	Grab Composite	
	Container	Cleaning Procedure	Landfill	Industrial	Time Space	
(Glass Jar	Detergent Wash	Leachate	Effluent		
`	Plastic Jar	Water Rinse	Drum	Process Stream	Collection (Ending) Date	
	Metal	Acid Rinse	Test Well	Holding Pond	Collection (Ending) Date	-
	POA Vial	Solvent Rinse:	Depth:	Drum)	1 9 Mo Day	7
	Cubitainer	Acetone	Other:	. Waste Pile	MININE KIS	J
	Acetate Core	Hexane		Municipal Treatment	Ending Time (24 Hr)	
,	Paper Cap	Methylene Chloride	Storage Tank	Influent	1 1 2 2	•
	Teflon Cap	Other (Specify):	Тор	Effluent-Ci	1 2 0 3	
	Foil Cap		Middle	Effluent-Non Cl	Beginning Date	7,
	Other		Bottom			¬
	Outer	1555	Totale	Sludge	917 MO 2Day-	
	B-second les	E55 glarenue	Truck	Ambient		
	Preservation	laure 1	Drum	Lake		
	Acid	1	1	Stream	Beginning Time (24 Hr)	
	Solvent	(Other	Pond	111166	
	Chemical			Ocean	1	
	Wet Ice		Wells	Estuary	pH	
	Dry Ice	·	Monitoring			
	Ambient		Production			
	Other		Drinking			
•	Marie Company		Private	A Section of the sect	Sample Temp. (°C)	•
	Sample Location De	scription:		a the second of the second of the second of		
· ·	V 100 100 100 100 100 100 100 100 100 10					
			.1 /		DO (mg/i)	· .
	reconstruction	DRUM	# 114	e gastaria, e la calendaria		
		DKU	′′/			147 147
	1.0				Cond (AMUSO)	
				•	Cond. (uMHOS/CM)	-
			•			
			•		 	1
	Banada:	. ma. las 1			Salinity(% _e)	· · · · · · · · · · · · · · · · · · ·
	Remarks:	•	•			•
			` / · <i>_1</i>	-11/4.		
	1-0.0	alies in	, Ignlo	avury.	Sample Split	Amerika i visika. Soloja
	1 80%.	glas ja	A^{-}			
	$\boldsymbol{\nu}$		V ,	U	☐ Yes X No	
	,	•		$\frac{\partial \mathcal{L}_{ij}}{\partial x_i} = \frac{\partial \mathcal{L}_{ij}}{\partial x_i} = \partial $		
		•			If Yes With Whom?	
		•			Receipt	No
			•			
				* 1		

	Project Name				Samples to:
	Collector(s)	ON/DUSAN	Affiliation <u>USE</u>	PA	Bact Bio Chem Other
	SAMPLING METHO Kemmerer D Niskin Net Trowel Crea Automatic, Other	Predge Ponar Manual Seine Trawi Bucket m Dipper	LDMS CODE DATA BASE STA. TYPE C	CODE	Station No. Sample Depth (Ft.)/Fac. Loc. Code
			ctract Other	<u> </u>	Lab Number 204365
	BOD — Seed Supp	lied ☐ Yes □ No	Source:	gardin en estratulation	
•		Preparation (Circle)		Source Type (Circle)	Type of Sample Grab Composite
	Container	Cleaning Procedure	Landfill	Industrial	
,	Glass Jar Plastic Jar Metal POA Vial Cubitainer Acetate Core Paper Cap Teflon Cap Foil Cap Other Preservation Acid Solvent Chemical Wet Ice Dry Ice Ambient Other	Detergent Wash Water Rinse Acid Rinse Solvent Rinse: Acetone Hexane Methylene Chloride Other (Specify): ESSSUME	Landrill Leachate Drum Test Well Depth: Other: Storage Tank Top Middle Bottom Truck Drum Tank Other Wells Monitoring Production Drinking Private	Effluent Process Stream Holding Pond Drum Waste Pile Municipal Treatment Influent Effluent-Cl Effluent-Non Cl Sludge Ambient Lake Stream Pond Ocean Estuary	Collection (Ending) Date Yr Mo Day G 7 / / 2 / 5 Ending Time (24 Hr) / 2 / 0 Beginning Date GYT7 Mo Day Lambda Day Day Time (24 Hr) / 2 / 0 Beginning Time (24 Hr) / 2 0 3 PH Sample Temp. (*C)
• • • • • • • • • • • • • • • • • • •	Sample Location D	escription:			DO (mg/l) Cond. (uMHOS/CM)
	Remarks:	*	i		Salinity(% _a)
1- F	oz Jnn: 19	awitibility			Sample Split Yes No If Yes With Whom? Receipt Yes No

ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey ENVIRONMENTAL SERVICES DIVISION

Bio Chem Other No. Depth (Ft.)/Fac. Loc. Code The Space On (Ending) Date Time (24 Hr) 1 7
Depth (Ft.)/Fac. Loc. Code mber 194367 Sample Composite Time Space on (Ending) Date Mio Day Time (24 Hr)
Sample Composite Time Space on (Ending) Date Time (24 Hr)
Sample Composite Time Space on (Ending) Date Time (24 Hr)
Composite Time Space on (Ending) Date Time (24 Hr)
on (Ending) Date Mo Day Time (24 Hr)
on (Ending) Date Mo Day I'me (24 Hr)
Mo Day 1/ 2/5
ng Date Mo 2 2 3 ng Time (24 Hr)
- 1 0 Temp. (°C)
MHOS/CM)
% ,
(ju

—	Project Name	TANI STEEL	Down		Samples to:
	Collector(s)		Affiliation US C	-PA	Samples to: Bact Bio Chem Other
			Annauon		Back Bio Colletti Otties
	SAMPLING METHOR Kemmerer Dr Niskin Net		LDMS CODE	ODE	Station No.
	Trowel Crear	n Dipper	STA. TYPE CO	DE	
	Automatic Other Coliz				Sample Depth (Ft.)/Fac. Loc. Code
	Other <u>COII</u>	PRSA			
	CURCTOATE TYPE	Olasiai Aassassa O			1 Links - Links - Links
	SUBSTRATE TYPE (Sediment Sludg		Lab Number
•			. The state of the	point)	204368
	BOD — Seed Suppli		Source:		Type of Sample
		Preparation (Circle)		ource Type (Circle)	Grab Composite
• • • •	Container	Cleaning Procedure	Landfill	Industrial	Time Space
	Glass Jar Plastic Jar	Detergent Wash Water Rinse	Leachate	Effluent Process Stream	
	Metal	Acid Rinse	Drum Test Well	THolding Pond	Collection (Ending) Date
÷	POA Vial	Solvent Rinse:	Depth:	Drum Pond	917 11/ 215
	Cubitainer	Acetone	Other:	Waste Pile	971125
	Acetate Core	Hexane		Municipal Treatment	Ending Time (24 Hr)
•	Paper Cap	Methylene Chloride	Storage Tank	Influent	1224
	Teflon Cap	Other (Specify):	Тор	Effluent-Cl	1221
•	Foll Cap		Middle	Efflüent-Non Cl	Beginning Date
	Other	E.S.S.	Bottom	Sludge	917 Mo Day
		9/nsswnn6	Truck	Ambient	9,7,1,2,3
	Preservation	7,7,5	Drum	Lake	
	Acid		Tank	Stream	Beginning Time (24 Hr)
	Chemical		Other	Pond	1 1 2 1 7
•	Wet Ice		Wells	Ocean Estuary	
	Dry Ice		Monitoring		pH
	Ambient		Production		
	Other		Drinking		
· .			Private		Sample Temp. (°C)
	Sample Location De	scription:			
•	Daum #	076			
					DO (mg/t)
	·			; ;	
٠	* * * .		:. .		Cond. (uMHOS/CM)
•			•	•	
		•	••		
-	Remarks:				Salinity(% _e)
			*		
1	- FOR THE	: 19 N.T. 611.7	7		
•	- 30 0				Sample Split
					☐ Yes ☑ No
•					If You Wish Whand
	en e				If Yes With Whom?
					Receipt 🗆 Yes 🗆 No

		A = == A : = ==			-		<u> </u>
	Project Name	CENTRAL ST	EEL DRU	(H	Samples to	/	, .
	Collector(s) TR	AN/ DUEAN	Affiliation US	EPA	Bact	Bio Chepi	Other
					4		
* •	SAMPLING METHO	D (Circle)	LDMS CODE		Station No.		
		Predge Ponar (Manual	ノ	\mathcal{H}	Station No.		
	Niskin Net	Seine Trawl Bucket	DATA BASE CO	DDE			
•	Trowel Crea	m Dipper	STA. TYPE CO	DE			
	Automatic	COLIWASA			Sample Dep	oth (Ft.)/Fac. Loc	. Code
	Other	·LULIWASA					
				<u></u>	1 1		
	SUBSTRATE TYPE	(Circle) Aqueous	Sediment Sludge	Oil Biological	Lab Numbe	r	
•		Solvent E	xtract Other	PAINT		1004	7
		CONTON		7 1111	20	4369	
	BOD — Seed Supp	lied 🗆 Yes 🗆 No	Source:	angseling and sample to the interest	Type of Sag	male	
	Sample	Preparation (Circle)	Sample So	ource Type (Circle)	Grab /	Composite	
	Container	Cleaning Procedure	Landfill	Industrial		Time Space	1
. /	Glass Jar	Detergent Wash	Leachate	Effluent	<i>V</i>		
,	Plastic Jar	Water Rinse	Drum	Process Stream	Collection (Ending) Date	
	Metal	Acid Rinse	Test Well	Holding Pond	Yr -		
	POA Vial	Solvent Rinse:	Depth:	Drum)	97	Mo Day	-
	Cubitainer	Acetone	Other:	Waste Pile			
	Acetate Core	Hexane)		Municipal Treatment	Ending Tim	e (24 H <u>r)</u>	
•	Paper Cap	Methylene Chloride	Storage Tank	Influent	1 1 2 :	3 1	•
	Teflon Cap	Other (Specify):	Тор	Effluent-Cl	1 [,]		P. J. San .
	Foii Cap		Middle	Effluent-Non Cl	Beginning I	Date	
	Other	- rcs	Bottom	Sludge	9"7	Mo Day-	•
		= 15.5	Truck	Ambient	1.[7]/	11/23	•
	Preservation	ESS glassia	Drum	Lake			e la companya de la c
	Acid	- gran	Tank	Stream	Beginning 1	Time (24 Hr)	•
	Solvent		Other	Pond	1 2 3	2 4	
	Chemical	-		Ocean		11	
	Wet Ice		Wells	Estuary	pH	 	
	Dry Ice		Monitoring			T 1	
	Ambient		Production				
	Other	-	Drinking				
		-	Private		Sample Ten	<u>np. (°C)</u>	
	Sample Location D	escription:					
	√ 1. The state of						
		DRUH	# 1160		DO (mg/i)		
		DKUM	770				
*		in the Tar ing in the significant of the signific			Cond. (uMH	OS/CM)	
			•		11 10 10		1.00
			Marian Carlos				Augustus (1997)
					Salinity(%)		• .*
	Remarks:			La La Company	1		
·					H + 1		
	100	. glan jar-	1 +	0.14.			
	1- Xa	. glan 105-	1 grula	very.	Sample Spli		
	. 0 8				☐ Yes	∆ No	
				V			
					If Yes With	AAUOUJ.	
					Receipt	□ Yes □ N	0
	•.						

Form: FTB RPD-11-82-2

	Project Name	TRAL STEEL]	num		Samples to:
	Collector(s)	N/DIGAN	Affiliation US	EPA	Bact Bio Chepy Other
	SAMPLING METHOL		LDMS CODE		Station No.
	Niskin Net Trowel Crean	Seine Trawl Bucket	DATA BASE (
	Automatic Other <u>Calca</u>	JASA			Sample Depth (Ft.)/Fac. Loc. Code
	SUBSTRATE TYPE (ge Oil Biological	Lab Number 204370
	BOD — Seed Suppli	ed 🗆 Yes- 🗆 No	Source:		Type of Sample
	Sample F	Preparation (Circle)	Sample S	Source Type (Circle)	Grab Composite
	Container Glass Ja	Cleaning Procedure Detergent Wash	Landfill Leachate	Industrial Effluent	Time Space
	Plastic Jar Metal	Water Rinse Acid Rinse	Drum Test Well	Process Stream Holding Pond	Collection (Ending) Date
	POA Vial Cubitainer	Solvent Rinse:	Depth:	Drum Waste Pile	917 11 2 5
	Acetate Core	Hexane		Municipal Treatment	Ending Time (24 Hr)
	Paper Cap Teflon Cap	Methylene Chloride Other (Specify):	Storage Tank Top	Influent Effluent-Cl	1238
	Foil Cap Other	4.5.5.	Middle Bottom Truck	Effluent-Non CI Sludge Amblent	Beginning Date 9'r7 6'0 2Day 1 2 15
	Preservation Acid	E.S.S. glassware	Drum Tank	Lake	Beginning Time (24 Hr)
-	Solvent		Other	Pond Ocean	1231
	Wet Ice Dry Ice		Wells Monitoring	Estuary	рН
	Ambient Other		Production Drinking		
٠.			Private		Sample Temp. (*C)
	Sample Location De	scription:			
					DO (mg/l)
		CANADA CARA CARA CARA CARA CARA CARA CARA C			Cond. (uMHOS/CM)
<u> </u>	Remarks:				Salinity(%,)
	1- Foz Jnr.	. 19 N. 17 16 1/19	7		Sample Split
					If Yes With Whom?
					Receipt

Form: FTB RPD-11-82-2

SAMPLING METHO Kemmerer D Niskin Net Trowel Crea	D (Circle) Predge Ponar Manual Seine Trawl Bucket	LDMS CODE	CODE H	Samples to: Bact Bio Chem Other Station No. Sample Depth (Ft.)/Fac. Loc. Code
Container Glass Jar Plastic Jar Metal POA Vial Cubitainer Acetate Core Paper Cap Tetion Cap	Solvent	Landfill Leachate Drum Test Well Depth: Other: Storage Tank	Anna Kalanda (1986) a sa a	Lab Number 204371 Type of Sample Grab Composite Time Space Collection (Ending) Date Yr 7 Mo Day Ending Time (24 Hr) / Z 4 5 Beginning Date Yr 7 Mo Day Beginning Time (24 Hr) / Z 3 8 PH Sample Temp. (*C)
Sample Location D		# 14-2		DO (mg/l) Cond. (uMHOS/CM) Salinity(%,) Sample Split Yes No If Yes With Whom? Receipt □ Yes □ No

	- /-	741/5-751	Daring		
	Project Name	JAN STEEL Z	MUMI		Samples to:
	Collector(s) TAN	U/Dugan A	ffiliation <u>USB</u>	PR	Bact Bio Chem Other
	SAMPLING METHOD Kemmerer Dr	edge? Ponar Mandal Seine Trawl Bucket Dipper	LDMS CODE DATA BASE C STA. TYPE CO	ODE	Station No. Sample Depth (Ft.)/Fac. Loc. Code Lab Number
				and the second s	204312
	BOD — Seed Suppli		Source:		-Type of Sample
		reparation (Circle)		ource Type (Circle)	Grab Composite
	Container	Cleaning Procedure	Landfill	Industrial	Time Space
	Glass-dar	Detergent Wash	Leachate	Effluent	
	Plastic Jar	Water Rinse	Drum	Process Stream	Collection (Ending) Date
	Metal	Acid Rinse	Test Well	Holding Pond	
	POA Vial	Solvent Rinse:	Depth:	Brum	9 7 Mo Day
	Cubitainer	Acetone	Other:	Waste Pile	
	Acetate Core	Hexane		Municipal Treatment	Ending Time (24 Hr)
	Paper Cap	Methylene Chloride	Storage Tank	Influent	1 2 5 2
	Teflon Cap	Other (Specify):	Тор	Effluent-Cl	
	Foil Cap	100	Middle	Effluent-Non Cl	Beginning Date
	Other	E.S. S	Bottom	Sludge	917 /Mo/ ZDax-
		glassware	Truck	Ambient	11/1/12/3
	Preservation	71003	Drum	Lake	
• • •	Acid		Tank	Stream	Beginning Time (24 Hr)
	Solvent		Other	Pond	1245
	Chemical			Ocean	[[/[6]7]3]
	Wet Ice	· ·	Wells	Estuary	-14
	Dry Ice		Monitoring .		pH
	Ambient		Production		
	Other		Drinking	3	
			Private	The state of the s	Sample Temp. (°C)
	Sample Location De	scription:	Santing to write		
-	Darm of	140			
	UNUM A		٠ - المراجعة المراجعة - المراجعة		DO (mg/l)
			The state of the s		Cond. (uMHOS/CM)
	* 1 19 19 19 19 19 19 19 19 19 19 19 19 1				
					Callabarar >
7 - 7	Remarks:				Salinity(%)
	Tionano.				
	C.	1-1-1-1-1-1	 		
7-	OE JAR	19 Ni Tibility			Sample Split
			•		□ Yes ☑ No
					If Yes With Whom?
					A Section of the Control of the Cont
					Receipt
	٠.		*		1966年,在17的1日,198 6年代 1989年,在1967年,1977年,1977年

		CENTRAL ST		иМ	Samples	to:	/	7
	Collector(s) 7/C	AN/DUGAN	Affiliation $\underline{\qquad} \underline{\qquad}$	is EPA	Bact	Bio	Chegr	Other
	SAMPLING METHOL	48.407 1 1 1 1 1 1 1 1 1	LDMS CODE	0	Station	No.	IV	
		redge Ponar Manual	DATA BASE C	one H				
	Niskin Net	Seine Trawl Bucket	DATA BASE C	NUE				
•		n : Dipper	STA. TYPE CO	DDE	Sample	Donth (Et	.)/Fac. Loc	Codo
	Automatic Other	COLIWASA				Deptil (r t]	, oode
	SUBSTRATE TYPE (Circle) Aqueous S	ediment Studg	e Oil Biological	Lab Nur	nhor		
•			tract Other	PAINT		043	73	7
	BOD - Seed Suppli	ed Yes No	Source:	and the second second	Type of			
• •	Sample P	Preparation (Circle)	Sample S	Source Type (Circle)	Grat		mposite	
	Container	Cleaning Procedure	Landfill	Industrial] [, ,	Tim	e Space	1
(Glass Jar	Detergent Wash	Leachate	Effluent				
	Plastic Jar	Water Rinse	Drum	Process Stream	Collection	on (Endin	a) Date	
	Metal	Acid Rinse	Test Well	Holding Pond	Mr-	Mo,	Day	H .
	POA Vial	Solvent Rinse:	Depth: (Drum	1171/		13	
	Cubitainer	Acetone	Other:	Waste Pile	Foding	Time (24 I	4=1	
	Acetate Core	Hexane		Municipal Treatment	J	· · ·	ייי ר	
	Paper Cap	Methylene Chloride	Storage Tank	Influent	112	5 9		
	Teflon Cap	Other (Specify):	Top	Effluent-Cl	Basinal		J	2 / / h-
	Foil Cap Other		Middle Bottom	Effluent-Non Cl	V-	ng Date		***
	Other	rc	Truck	Sludge Ambient	197	, Mo,	235	
	Preservation	ESS glissedave	Drum	Lake		1,1	لنلا	
	Acid	n mare	Tank	Stream	Regionis	ng Time (2		
	Solvent	chear	Other	Pond	Degiliilii]	
	Chemical	Y	O UTION 2	Ocean	1116	15/2		
	Wet ice	U	Wells	Estuary				<u> </u>
	Dry Ice		Monitoring	1	pH		1	
	Ambient		Production					
	Other		Drinking			<u> </u>	J	ili di serio di serio. Serio di serio di se
• •	4 7		Private		Sample	Temp. (°C)	
1.	Sample Location De	scription:	· 1998年,本国政治人		11 1		Sav Sav	n a geologia (m. 1945) a statis Pombo (m. 1947) pombo a statis
'	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \					1 . 4		
		DRUM	# 120		DO (mg/)		
		DRUM	/3/					
						<u> </u>	J	
	•				Cond. (u	MHOS/CN	1)	
		and the state of				<u> </u>	لسلسا	
					Salinity(%.)		Territoria.
	Remarks:			A.				opportunities of the second
	1- Pm	ales ict	· lon	tability	Sample	Split		
	1 00%	glass jar	7,-	1		res d	/No	
	_			V • • • •	2 3 4 5 7 7 7			
					If Yes W	th Whom	?	
					Receipt	□ Ye	8 🗆 N	ło .
					1000			

	· .			<u>-</u>	
Pro	oject Name <u>Cc</u>	Trent Steel	mom		Samples to:
Co	ellector(s) TRA	N/DUGAN A	ffiliation USE	PA	Bact Bio Chem Other
SA	AMPLING METHOD Kemmerer Dro Niskin Net	edge Ponar Manual Seine Trawi Bucket Dipper	DATA BASE CO STA. TYPE CO	ODE	Station No. Sample Depth (Ft.)/Fac. Loc. Code Lab Number
	DD — Seed Supplie	ed 🛘 Yes 🗆 No	Source:		
<u></u>					Type of Sample
		reparation (Circle)		ource Type (Circle)	Grab Composite
	ontainer	Cleaning Procedure	Landfill	Industrial	Time Space
	ass del	Detergent Wash Water Rinse	Leachate	Effluent	
	astic Jar		Drum	Process Stream	Collection (Ending) Date
	etai	Acid Rinse	Test Well	Holding Pond	Yr Mo Day
	DA Vial	Solvent Rinse:	Depth:	Drum	971125
	ubitainer	Acetone	Other:	Waste Pile	Ending Time (24 Hr)
	cetate Core	Hexane		Municipal Treatment	
	aper Cap	Methylene Chloride	Storage Tank	Influent	1 1 3 0 6
	eflon Cap oil Cap	Other (Specify):	Top Middle	Effluent-Ci	Basine's Basine
	ther	E.S.S.		Effluent-Non Ci	Beginning Oate
O.	(1161	0.4	Bottom	Sludge	917 Mo, 2Pay
	reservation	9 hisswall	Truck	Ambient	
	cid		Drum	Lake	
	olvent		Tank	Stream Pond	Beginning Time (24 Hr)
	hemical		Other		2 5 9
	et ice		Wells	Ocean	
	ry Ice			Estuary	рН
	mbient	· .	Monitoring Production		
	ther				
` ; <u> </u>	mer		Drinking Private		Sample Temp. (°C)
Sa	ample Location Des	scription:			
-		469			
DI	num #:	089			DO (mg/l)
* * .	•				
		resident green als also also also also also also also			Cond. (uMHOS/CM)

			·		Salinity(% _e)
	marks:	A STATE OF THE STA	the second second		
			, ,		
1-	802 JAR	· 19Nitibility	7		Sample Sallt
	V				Sample Split
					☐ Yes ☐ No
					16 Van Mith Min - A
	,				If Yes With Whom?
•	•				Receipt
		•		**	

Form: FTB RPD-11-82-2

		CENTAAL CA	FET NA.	<i>(</i> A	
		CENTRAL ST			Samples to:
	Collector(s)/K	AN/	Affiliation	SEPA	Bact Bio Chem Other
-	SAMPLING METHO Kemmerer D Niskin Net Trowel Creat Automatic Other SUBSTRATE TYPE (BOD — Seed Supple Sample Container Glass Jar	D (Circle) redge Ponar Manual Seine Trawl Bucket m Dipper CICCICL IWASA Circle) Aqueous S Solvent Ex ied Yes No Preparation (Circle) Cieaning Procedure Detergent Wash	ediment Sludg tract Other Source: Sample S Landfill Leachate	ODE H ODE F ODE Source Type (Circle) Industrial Effluent	Station No. Sample Depth (Ft.)/Fac. Loc. Code Lab Number 294375 Type of Sample Grab Composite Time Space
	Plastic Jar Metal	Water Rinse Acid Rinse	Drum Test Well	Process Stream Holding Pond	Collection (Ending) Date
	POA Vial Cubitainer	Solvent Rinse:	Depth:	Drum Wäste Pile	97/11/23
	Acetate Core	Acetone Hexane	Other:	Municipal Treatment	Ending Time (24 Hr)
	Paper Cap	Methylene Chloride	Storage Tank	Influent	1313
	Tollon Con	Other (Cassiful)	Тор	Effluent-CI	[[1]]]
	Foil Cap		Middle	Effluent-Non Cl	Beginning Date
	Other	ESS	Bottom Truck	Siudge Ambient	917 Mo, Day-
	Preservation Acid Solvent Chemical Wet Ice Dry Ice Ambient Other	ESS qlusumose	Drum Tank Other Wells Monitoring Production Drinking Private	Lake Stream Pond Ocean Estuary	Beginning Time (24 Hr) 1 3 6 6 pH Sample Temp. (*C)
	Sample Location De	DRUM	#137		DO (mg/l) Cond. (uMHOS/CM) Selleitu(#4.)
	1-803	glan jer	/grit	ability	Salinity(%) Sample Split Yes X No If Yes With Whom? Receipt Yes No

Project Name	CENTRAL STA	EL DRUI	Y can be seen to be se	Samples to:
Collector(s)	AN/DUGAN	Affiliation_ \mathcal{U}	SECA	Bact Bio Chem Other
SAMPLING METHO Kemmerer Niskin Net Trowel #Crea Automatic Other	DD (Circle) Dredge Ponar Manual Seine Trawi Bucket am Dipper #	LDMS CODE DATA BASE (ODE F	Station No. Sample Depth (Ft.)/Fac. Loc. Code
SUBSTRATE TPE			ge ≶Oil ≩ Biological ் PAINT	Lab Number # 099618
	olied Yes ;; □ No Preparation (Circle)	Source:	and have and making managed and might	20 March 1977 - 1979 - 1979
Container Glass Jar Plastic Jar Metal POA Vial Cubitainer Acetate Core Paper Cap Teflon Cap	Cleaning Procedure Detergent Wash Water Rinse Acid Rinse Solvent Rinse: Acetone Hexane Methylene Chloride Other (Specify):	Landfill Leachate Drum Test Well Depth: Other: Storage Tank Top Middle Bottom Truck Drum Tank Other Wells Monitoring Production Drinking Private	Industrial Effluent Process Stream Holding-Pond Drum Waste Pile Municipal Treatment Influent Effluent-Ci Effluent-Non Ci Sludge Ambient Lake Stream Pond Ocean Estuary	Collection (Ending) Date 977 Mo Day Ending Time (24 Hr) 1 3 2 7 Beginning Date 977 Mo Day 2 5 Beginning Time (24 Hr) 1 3 2 6 PH Sample Temp. (*C)
Remarks:	DEUR S		tality	DO (mg/l) Cond. (uMHOS/CM) Salinity(%) Sample Split Sample Split If Yes With Whom? Receipt Yes No

			a som gann noo	 The second of the control of the contr	responding to the control of the con
	Project Name Collector(s)		Affiliation US	EPA	Samples to: Bact Bio Chem Other
	SAMPLING METHOL	O(Circle) edge Ponar Manual Seine Trawl Bucket n a Dipper	LDMS CODE DATA BASE (STA. TYPE O		Station No. * Sample Depth (Ft.)/Fac. Loc. Code
	SUBSTRATE TYPE (ediment Slud	ge # Oll * Blological * アル・ベイエ * **。	Lab Number 1
	POD Sood Suppli	A STATE OF THE PROPERTY OF THE			
		ed Yes □ No ∶ Preparation (Circle)		Source Type (Circle)	Type of Sample in the distance of security and
	Container	reparation (Circle)	Landfill		
	Glass Jar Plastic Jar	Detergent Wash Water Rinse	Leachate Drum	Effluent Process Stream	Collection (Ending) Date
•	Metal POA Vial	Acid Rinse Solvent Rinse:	Test Well Depth:	Holding Pond Drum	Yr Mo Day 9 7 1/2 5
, . , .	Cubitainer Acetate Core	Acetone * Hexane	Other:	Waste Pile Municipal Treatment	Ending Time (24 Hr)
	Paper Cap	Methylene Chloride	Storage Tank	Influent	i 3 3 4
	Teflon Cap	Other (Specify):	Тор	Effluent-Cl	
	Foil Cap		Middle	Effluent-Non Cl	Beginning Date
	Other	55	Bottom Truck	Sludge Ambient	917 Mo Day -
	Preservation	E.S.S. 9/assumm	Drum	Lake	
	Acid	9/33.0	Tank	Stream	Beginning Time (24 Hr)
•	Solvent		Other	Pond	1327
	Chemical		Add the second second	Ocean	
	Wet Ice Dry Ice		Wells ♥ ♣ ♣ ♣ ♣ ♣ ♣ ♣ ♣ ♣ ♣ ♣ ♣ ♣ ♣ ♣ ♣ ♣ ♣	Estuary	pH example 1
	Ambient		Production		
	Other		Drinking		
35.			Private :		Sample Temp. (*C)
	Sample Location De	scription: 🎺 🔭 🛶 🚟		- 100 200	
	Drum #	137_			DO (mg/l)
					Cond. (uMHOS/CM)
٠,					
	Remarks:		The second secon		Salinity(%)
	1-802 700	192.17.2.1.	ク デー		Sample Split
					=□ :Yes (
					If Yes With Whom?
					Popular V D V

	CENTRAL STE	FINA	1104	
Project Name	RAN/DUGAN A		SEPA	Samples to:
The state of the s	Control of the Contro	milation		Bact Blo Chem Other
SAMPLING METHO		LDMS CODE		Station No.
The state of the s	redge Ponar Manual	DATA BASE C	One H	
The state of the s	Seine Trawl Bucket	(AL 4	The second second	
Trowel Crea		STA. TYPE CO	DDE	Sample Depth (Ft.)/Fac. Loc. Code
Other	CULIWASA	Viet in		
SUBSTRATE TYPE	Circle) Aqueous 🧀 Se	diment 📆 Sludg	je 🐍 Oil 📑 Biological 🖟	Lab Number
	Solvent Ext	ract Other	PAINT	099620
		San Contraction of the Contracti		
	led ¥□ Yes □ No □ Preparation (Circle)		Source Type (Circle)	Type of Sample # 12 Sample # 20 Sample # 2
Container	Cleaning Procedure	Landfill		Grab /4-Composite / Time Space
Glass Jar		Leachate	Effluent	
Plastic Jar	Water Rinse	Drum	Process Stream	Collection (Ending) Date
Metal •	Acid Rinse	Test Well	Holding Pond	OYIO Mo Day
POA Vial	Solvent Rinse:	Depth:	Drum	11711/11251
Cubitainer	Acetone	Other:	Waste Pile	Ending Time (24 Hr)
Acetate Core Paper Cap	Hexane Methylene Chloride	Storage Tank	Municipal Treatment Influent	
Teflon Cap	Other (Specify):	Top	Effluent-Cl	1341
Foll Cap		Middle	Effluent-Non Cl	Beginning Date
Other	- CCC	Bottom	Sludge	917 Mo Day
2.0° × × × × × × × × × × × × × × × × × × ×		Truck 2	Amblent	1711/1/23
Preservation Acid	ESS.	Drum	Lake	
Solvent_	9/	Tank ** ** Control of the control of	Stream Pond	Beginning Time (24 Hr)
Chemical			Ocean	1/3/3/4/
Wet Ice		Wells 😂 👙	Estuary	pH .
Dry Ice		Monitoring		
Amblent		Production		
Other		Drinking Private		Sample Temp. (°C)
Sample Location D		Filvate		
Dample Location D				
		4		DO (mg/l)
	DRUH	#235°		
				Cond. (uMHOS/CM)
Remarks:				Salinity(%)
, 2	, zlin jat		+ ((/+;)	Sample Split
1-50	glast ja	· Ign	raysy	
		Art Artist		□ Yes A No
				If Yes With Whom?
		在 时间的一个		

			· A Sale Williams	THE PARTY OF THE P	Service Control of the Control of th
	Project Name Co	NEW STEEL D		<i>c20</i> -	Samples to: Bact Bio Chem Other
	in the Albert Agent is figure of the second				
	SAMPLING METHO	Oredge Ponar Manual	LDMS CODE	The second second second second	Station No.
	化二氯甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基	Seine Trawi Bucket	DATA BASE	CODE	
	Trowel 🐇 Crea		STA. TYPE C	ODE	
	Automatic		30.0		Sample Depth (Ft.)/Fac. Loc. Code
1	Other - Col	/WASK			
17.	SUBSTRATE TYPE	(Circle) Aqueous S	ediment Slud	ge 🐉 Oil 😹 Biological	Lab Number
			ract * Other		
			Property Property		099621
	7.7 p. 1	Preparation (Circle)			
	Container	Cleaning Procedure			Grab Composite Time Space 4
	Glass Jar	Detergent Wash	Leachate 🚁	Effluent	
	Plastic Jar	Water Rinse	Drum	Process Stream	Collection (Ending) Date
	Metal POA Vial	Acid Rinse Solvent Rinse:	Test Well Depth:	Holding Pond	QYr Mo Day
	Cubitainer	Acetone	Other:	_ Waste Pile	97/125
	Acetate Core	Hexane		Municipal Treatment	Ending Time (24 Hr)
	Paper Cap	Methylene Chloride	Storage Tank	Influent	1 3 4 8
1:.	Teflon Cap Foil Cap	Other (Specify):	Top	Effluent-Cl Effluent-Non Cl	Beginning Date
	Other		Bottom	Sludge	9'7 Mo Pay Tim
		≟ € '	Truck	Ambient	
	Preservation Acid_	essis	Drum	Lake	
	Solvent -		Tank	Stream Pond S	Beginning Time (24 Hr)
	Chemical		A STATE OF THE STA	Ocean	
	Wet Ice	The second second second	Wells	Estuary .	рН
	Dry Ice Ambient		Monitoring Production		
	Other		Drinking -k		
2.0			Private # 21		Sample Temp. (°C)
# 75 14/10	Sample Location D	Description: 👼 🗯 🚉			
	Drum #	717.46			DO (mg/l)
		Company			
					Cond. (uMHOS/CM)
3					Sallake/9/
	Remarks:				Salinity(%)
		疑。"三 ",:			
	1- lot Jng	i: :19wiT. Lility			Sample Split
					D'Yes Zi No
and the same					
					If Yes With Whom?
					Receipt Yes D No
		. ta. 4925 (t. 4) & L.T. 2007 (1975)	*200 图像 图像 2000 图像		

FIELD DATA SHEET
ENVIRONMENTAL PROTECTION AGENCY - Region II, Edison, New Jersey

ENVIRONMENTAL SERVICES DIVISION

	and a second and defects of the formal defects of	The second secon	Trade and the State of the Stat	A STATE OF THE STA	The state of the s
		TAN STEEL		21	Samples to: Bact Blo Chefn Other
	Trowel Cream Automatic Other	edge Ponar Manual Seine Trawl Bucket EDipper 2		DDE	Station No. Sample Depth (Ft.)/Fac. Loc. Code Lab Number
				PAINTT (*)	099617
	BOD — Seed Supplie	ed 🧱 🗆 Yes 🐴 🗆 No 🛬	Source:	4 (2.5 (a) (a	Type of Sample
		reparation (Circle)		ource Type (Circle)	Grab Composite
ζ.	Container Glass Tar	Cleaning Procedure Detergent Wash	Landfill Leachate	Industrial Effluent	
	Plastic Jar	Water Rinse	Drum Test Well	Process Stream	Collection (Ending) Date
	Metal POA Vial	Acid Rinse Solvent Rinse:	Depth:	Holding Pond Drum	9 7 Mo J Day
	Cubitainer Acetate Core	Acetone Hexane	Other:	Waste Pile Municipal Treatment	Ending Time (24 Hr)
	Paper Cap	Methylene Chloride	Storage Tank	Influent	
	Teflon Cap	Other (Specify):	Тор	Effluent-Cl	1329
	Foil Cap Other	FCC	Middle Bottom	Effluent-Non Cl Sludge	Beginning Date
	The state of all a	6.5.5. g/assware	Truck	Amblent	
	Preservation ***** Acid ************************************	*7/25/20	Drum &	Lake Stream	Beginning Time (24 Hr)
- 1	Solvent		Other	Pond .	113113
	Chemical Wet Ice		Wells	Ocean Signature	
	Dry Ice		Monitoring		OPH SECURITION OF THE PROPERTY
	Ambient Other		Production 2		
			Private -	100	Sample Temp. (*C)
	Sample Location Des	<u>scriptions</u>			
	Drypus :				DO (mg/l)
4.6				V ening	
		\$ 14.8 1			Cond. (uMHOS/CM)
				A Committee of the control of the co	
ide ida Perdan	Para-lei Tara-				Salinity(%)
	Remarks:				
	605 1VV	19~7731/7			Sample Split
					ാത ഗ്ര
		ANY DESCRIPTION OF THE PROPERTY OF THE PROPERT			If Yes With Whom?
					Receipt - OYG ONO
	200	and the same of the constitution of the contract of the contra	1. The A. Sec. 1985, NO. 1 15 15 15 15 15 15 15 15 15 15 15 15 1	CONSTRUCTION OF THE CONTRACTOR OF THE	

ANALYSIS REQUEST:



ENVIRONMENTAL PROTECTION AGENCY/ Environmental Services Division

Date of Request Source of Sample(9) Sample Number(9) Type of Sample Water Sediment	Denn 2 2 1	medito i Nome i sistingia.
PHYSICAL CHARACTERISTICS TUDDICITY Volation solids Total Superior Solids Volation Superior Solids Sationals	50169 PASSIGE	Corrosivity (RCRA) E Other
□ PCB's ' DEMA	El Priority Pollutants POA NVOA Softer Major Period (Carbon) Pesticides Herbicides Softer Major Period (Carbon) Reputation of the priority of the prior	ako Quantitato
INORGANIC ANALYSES PH		Cd
SENSITIVINAMETHOD CECOP PHIgh Love (>>0 mg/) Discording (>>0 mg/) Discording (>>0 mg/)	CONTROL OF THE CONTRO	i igasaninin
Fig. 10 10 10 10 10 10 10 10 10 10 10 10 10	ingenely (31) Ance (3) Virilant neament Other (Specify)	INSTITUTE INSTITUTE
Requested by Date Place Remarks	1967 Appoint by	

CHAIN OF CUSTODY RECORD

ENVIRONMENTAL PROTECTION AGENCY - REGION II
Environmental Services Division
EDISON, NEW JERSEY 08817

Name of Unit and	Address C TYAK V 10 TC 2 N 210 20 Y	FELDIUM A DOCANU N. T.	And .		
Sample Number of Container	Description of Samples				
(1) 1 35 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	asponsibility for Samples		Drum Drum Drum Drum Drum Drum Drum Drum	168 19 28 28 28 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	Tig Sec.
Sample Rein Solumb 300 375	plaka Dyr-	Casive By:	1123 (108) 112477 248	Region for Change	olemo)
Sample Relin	fantrikop.	Probably a	Clint Date	Literion for Change	O Cunicity
Restor A	quinted by:	Grained Byr.		- Pointo Apro	(Childre
	quinte 3 y 3	tiinii Da	1D 200		0.6:001

CHAIN OF CUSTODY RECORD

ENVIRONMENTAL PROTECTION AGENCY - REGION II
Environmental Services Division
Edison, New Jersey 08817

Name of Unit and A	dans Genillo Si Signification of the Newson Ken	eel Drum St. 4 Doreb NJ	M Diemus A	we.	
Number Continers OYS 61 ANGER ANGER	Description of Samples Co.		KCKA) - Dru E Dru	PULTM FULTM FULTM	
09960 09960 09960 1			'' - Dra) 152 N 1235 N 1171	
Person Assuming to	sponsibility for Samples 24				Jino Dab
Complete College	pished by:	Received By:	Time Date	Region for Change of	Custody.
	uillinc 3 73	Lectived by	Time Pore	leave for cheaps	Curredy 2
Sample Zaline	quished Dire	Received By:	Jime Deric	(Kriin) (Xeluija)	Cuttody
The state of the s	Cintri Dyr.	Acceived by:		Trittandared	Cuntody's

Receipt of SUSTADY RECORD WIND

ENVIRONMENTAL PROTECTION AGENCY — REGION II
ENVIRONMENTAL PROTECTION AGENCY — REGION II
EDISON, NEW JERSEY 08817
EDISON, NEW JERSEY 08817

Receipt of Samples CHAIN OF CUSTODY RECORD KIND

Environmental Protection agency - Region # Environmental Services Division EDISON, NEW JERSEY 08817

Name o	f Unit and i	Address: C	lentra Delanc Newa	1 ste ey st rk, n	cel Dru 17 Dore	lm umus	Ave	•	
Sample Number	Number of Containers		ion of Samples		·				
		8 3	glass	for I	gnitabil	ity (R	CRA)	- Drum # 033 - Drum # 066	
	1	· u	u	16	(C)		11	- Drum # 068	
	1	n	u	u	u u	. *		- Drum# 119	
] ji	ď	11	11		lï.		
		u	ti -	u	u		"	Drum #122	
		l a	11	ŢĹ	11			Drum # 008	
			•	(i	u			Drum#009	
		l (u				" -	Drum + 056	
		0	H.	(L			" -	- Drum#114	
		111	li.	tt.	1(·		- Drum # 059	
		1	ll	11	!!		- (C	Drum#170	
		₹7	11	11	\L	_	u ,	- Drum # 076	
		8%	glass	s for	Ignitab	ility ((RCRA))- Drum # 148	
Person	Assuming Re	esponsibility (for Sample:	•				Time	Date
Sample Number	Reling	juished By:			Received By:	Time	Date	Region for Change of Custody	•
Sample Number	Relinq	prished By:			Received By:	Time	Date	Reason for Change of Custody	
		+ %		٠.				•	•
•		•		•	,				
Sample	Relina	juished By:			Received By:	Time	Date	Reason for Change of Custody	
Number						•			
Sample	Relinq	uished By:			Received By:	Time	Date	Reason for Change of Custody	-1 - 1:, :
Number			ĺ						٠
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